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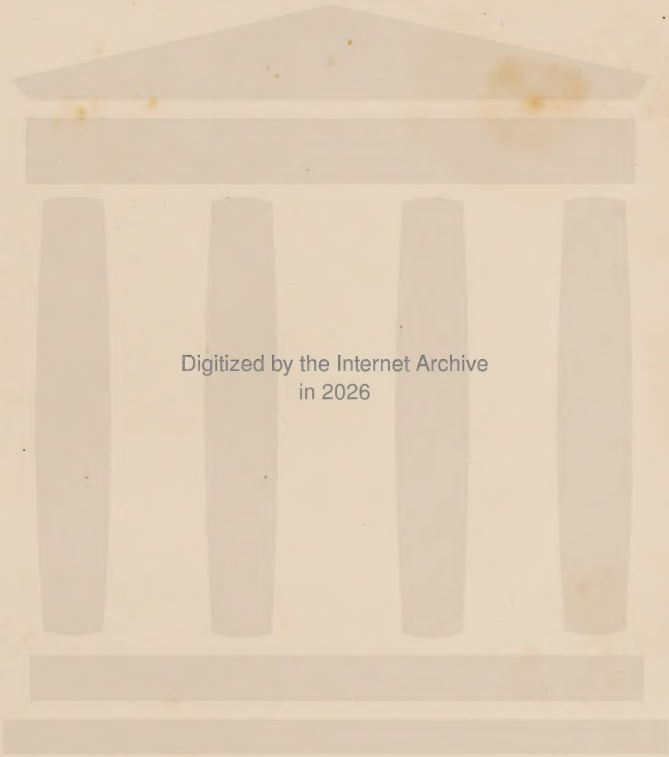

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MEDICAL SCIENCE.

AUGUST 1, 1853.

PART I.

ORIGINAL COMMUNICATIONS.

ART. I.—*Reflections on the Causes of Dropsy.* By SIR HENRY MARSH, Bart.

(*Continued from* Vol. XII. p. 278.)

BEFORE I proceed further in the consideration of the hemorrhages it will be expedient to dwell as succinctly as possible upon that variety of extravasation which I have formerly termed the white blood hemorrhage, or, in other words, dropsy or hydrops, so called from the resemblance which the uncoloured extravasation derived from the serum of the blood bears to water. In this there is more an appearance than a reality of divergence from my original subject.

In the year 1846 I published in this Journal some remarks upon chlorosis and hemorrhage, with the view of contrasting the one with the other, and also of contrasting the red blood and the white blood hemorrhages. The word hemorrhage is applicable to both because both are derived from the blood[a]. I also remarked upon some of the pathological differences be-

[a] Between the red blood and the white blood hemorrhage there is this difference, that the former is an extravasation of the blood in its entirety, whereas the latter is one of only certain portions of the blood, either not mingled at all, or but in a small degree mingled with red corpuscles.

tween chlorotic and hemorrhagic blood, the first low in density and in the proportion of red corpuscles; the second, ere yet reiterated hemorrhages have thinned and debased the blood, abnormally exalted in density, superabundant in red corpuscles, and deficient in fibrine.

It is now my purpose, that the subject of the hemorrhages may be rendered more clear, to make a few general remarks upon the causes of the white blood hemorrhages, or dropsies. To expose my views on this subject I shall speak of dropsy under three distinct heads: atonic dropsy, obstructive dropsy, inflammatory dropsy. There are few of the dropsies which we daily meet with in practice that will not find a befitting place under one or more of these heads.

By atonic dropsy I mean all those dropsical effusions which are the results of pre-existing morbid or febrile action,—of wasting and softening of the solids, of degeneration of the blood, and consequent atonicity of the vascular tissue.

By obstructive dropsy I would imply all those dropsies which result from organic disease of the heart, lungs, liver, spleen, &c.; and from tumours and other morbid growths which mechanically obstruct the circulation,—such obstruction causing the blood to stagnate in and to distend the venous trunks and capillary system, so that they become surcharged, and are compelled, if I may so say, to seek relief by a serous extravasation. When I reach this part of my subject I shall have occasion to show that obstruction is frequently not the sole cause of the white blood extravasation,—that more than one cause is influential.

By inflammatory dropsy I mean all those dropsies, and they are many in number and variety, which owe their origin to serous inflammation. This most important branch of my subject will require hereafter to be fully explored[a].

The red blood hemorrhages, as I have elsewhere noted, are naturally and practically divisible into the passive and the active. No two varieties of the same disease can be more diverse in causality and treatment—when the cases are well marked—than are the active and the passive red blood hemorrhages. The same observation is strictly applicable to the white blood hemorrhages or dropsies. The atonic hydropic effusions represent the passive red hemorrhages; the inflammatory, the active:—the parallel is perfect. Between the passive and active dropsies there are some remarkable discrepancies which may just be glanced at.

[a] Many of those dropsies to which the epithet encysted is by some writers applied, will find a place under this head.

In the passive or atonic the effusion takes place usually towards the close of prolonged chronic diseases,—it is one of the latest and most fatal indications: whereas in the active or inflammatory, serous extravasation is often synchronous with the first signs of morbid action. This is particularly remarkable in the anasarca of albuminuria[a].

In the passive or atonic the extravasation is generally first perceived in the most depending parts, commencing slightly and gradually, ascending from below upwards, invading the infra-cutaneous serous tissue, and ultimately the serous tissue of the cavities. But such is not ordinarily the course of active dropsy.

There is another very remarkable difference between these distinct varieties, viz., that which relates to the density of the extravasated fluid. In the passive or atonic dropsy it is, with not many exceptions, exceedingly thin and fluid; it consists, in fact, of the thinnest serosity,—only the most watery parts of the blood are exhaled. A proof of this is derivable from the slight degree of pressure needful to produce a pitting or indentation, and the rapidity with which the pitting or dimple is obliterated, and the fluid replaced; and in extreme cases, the transparency of the skin shows the fluidity and clearness of the subjacent extravasation; whereas generally in acute anasarca the effused fluid is more opaque, dense, firm, and resisting; a heavier pressure is required to produce a dimple; the dimple or pit is more slowly effaced. In some cases the fluid productive of anasarca is so thick and glutinous, that it requires much force to displace it, and, being displaced, very slowly is the smoothness of the skin restored. So great is the density sometimes, that even in those parts of the body where the cuticle and cutis are thinnest and softest, scarcely any amount of pressure can cause an impression; and thus we have presented to us that which I shall have occasion to dwell upon hereafter, viz., the anasarca dura,—a very interesting variety of anasarca. It belongs to the inflammatory section of dropsical effusions, and shall there be treated of. There results from the density and tenacity of the effused fluid another and conclusive test, viz., acupuncture. In the passive dropsy the tenuity of the fluid enables it to escape through the punctures freely and copiously, and in a stream. In the active, it escapes slowly and unwillingly, or, in some cases, not at all; consequently these are cases in which acupuncture is absolutely fruitless.

[a] I use the word "albuminuria" because, whilst it points to a specific disease, it implies not a theory, but a fact.

Such are, in a general way, some of the signs which in well-marked cases distinguish the active and passive varieties of dropsy.

Between the extremes of the thinnest serosity and the densest white blood exudations, the gradations are numberless, and often imperceptible; they pass insensibly from the one into the other. In all animated nature, when extremes approach, the lines of demarcation are oftentimes inappreciable. This, in disease, is as true as in the various kingdoms of organized nature; and therefore it is necessary, in the study of disease, to arrive at just conclusions by the contemplation of clear, distinct, and well-defined cases.

There is another distinction between active and passive dropsies which just occurs to my mind. In passive dropsies, the effused fluid is, with few exceptions, unmingled with the red corpuscles of the blood; they are rarely suffered to escape. In active or inflammatory exudations, the admixture of red corpuscles is of far more frequent occurrence. Why this should be the case, and what the true nature of serous inflammation is, I will endeavour to expose when the inflammatory dropsies shall be treated of[a].

The great interest which attaches itself to the careful study of white blood abnormal extravasations is derived, not only from therapeutic considerations, but also from the vast variety of pathological changes both in the fluids and solids which give origin to this frequently ominous symptom.

In reviewing the causes of passive or atonic dropsy, the clearest perceptions will be obtained by a brief statement of the facts of a few expressive cases. This symptom sometimes springs from a morbid change in the blood alone; sometimes from the more formidable source of organic visceral disease giving rise to a morbid change in the blood. When chronic visceral disorganizations terminate in dropsy, I have known as much terror excited in the patient's mind by the first appearance of œdema in the insteps and ankles, as there is by a sudden attack of profuse hemoptysis.

Œdema of the feet and ankles is often first distinctly perceived at bed-time. In the recumbent position the thin fluid diffuses itself through the areolar tissue. In the morning it has apparently vanished, but towards night the dreaded symp-

[a] The true cause of the infra-cutaneous extravasation which takes place at the *commencement* of renal anasarca is, I am persuaded, to be traced to serous or albuminous inflammation affecting the infra-cutanous serous tissue; an inflammation precisely of the same nature as, and in all respects analogous to, that which affects the kidneys.

tom re-establishes itself. When the patient resumes the sitting position, the fluid gravitates downwards, and the patient finds his legs again swollen, and thus his fond and vain hopes are dissipated. Great indeed is the popular dread not only of the appearance, but of the very name, of dropsy, and there is no disease more dreaded than that popularly called water on the chest.

The following fact, which I noted twenty-seven or twenty-eight years ago, impressed itself strongly at the time upon my mind, and I have often since in my lectures recurred to it as an exemplification of the passive or atonic dropsy without organic lesion.

A gentleman, thirty-five years of age, having been not more than three weeks recovered from maculated fever, performed in a remarkably easy carriage, and in summer, a journey of about fifty miles. The fever was one of the most formidable character, the undoubted offspring of contagion, so dangerous that at one time his medical attendants abandoned all hope of his recovery. At an early stage of the disease he was bled from the arm to ten ounces; subsequently so urgent were the cerebral symptoms that he was largely and repeatedly leeched. His skin was universally and darkly maculated; the fever was a protracted one; scarcely before the twenty-first day could it be said that it had quite subsided; the period of convalescence was painfully protracted by extensive sloughing of the nates. When the sores were healed, and strength somewhat reinstated, he travelled fifty miles from the city, and on reaching the end of his journey, he complained of stiffness in the joints of the lower limbs. The drawers and stockings were with difficulty removed. He was very much shocked and alarmed to find his limbs, as high as the hips, immensely swollen, and pitting everywhere on the slightest pressure; the scrotum and penis were also much distended.

The functions were all healthily performed; urine perfectly natural; bowels regular; no sign whatsoever of organic lesion, only he was pallid in the extreme, and greatly reduced in flesh and strength. Mild medicine, tonic and diuretic, pure bracing air, improving appetite and diet, wrought in this gentleman a miraculous and speedy change for the better. After the lapse of a few days the dropsy was so far subdued that he was enabled to take quiet walking exercise in the open air, which seemed to have the effect of promoting absorption. The improvement of the general health, and the subsidence of the dropsy, moved together "*pari passu;*" no long time elapsed ere restoration was perfected. He is now in robust and vigo-

rous health; never before nor since has he shown the slightest tendency to any form or variety of hydropic effusion. During the fever I remained constantly with him, and accompanied him in his journey. I was then a tyro, but at the time and often since I have thought that had he been less profusely bled, he might have been spared the extreme debility and the sloughing.

This example appears to me a good illustration of dropsy as a result of the wasting and softening of the tissues without organic lesion of any of the solid viscera.

There were in this case a prolonged and dangerous fever, and a tedious convalescence.

Now, the essential characteristic of all fevers, whether idiopathic or symptomatic, is a wasting and softening of the tissues. Febrile movements in the system present themselves under an infinite variety of forms, yet there is one point at which they all meet, viz., a wasting and softening of the tissues, whether it be the short-lived paroxysm of intermittent fever, or the persistent hectic fever, or the irritative or continued or remittent fever, or any of the intervening varieties,—it is a fact, that so long as the febrile movement is in operation, there is and must be a wasting and softening of the tissues, rapid in some cases, exceedingly gradual and slow in other cases, hence the condition is produced which may issue in atonic dropsy.

It should be kept in mind also, that so long as fever is operative upon the system, the digestive function is enfeebled,—the nutriment received into the stomach lowered in quantity, as well as in quality, often to an extreme degree; frequently the food is liquid, watery, and almost purely farinaceous. From this cause, as well as from morbid action, the function of sanguification is altered, and the blood degenerated and rendered less capable of stimulating the vascular system to the healthy discharge of its duties. This is precisely the condition of the liquids and solids which predisposes to dropsical effusions of the atonic character; or, in few words, the blood is degenerated, the tonicity and contractile force of the vascular tissue depressed, and hence, spontaneously (or, as happened in the case above narrated, after slight and premature exertion whilst in a state of extreme debility), congestion takes place, and a thin serosity is extravasated. So long as the cause remains, this persists and increases; the cause removed, it is wonderful with what celerity the absorbents—those ever-busy little creatures, always ready to undertake any new and extraneous office, ever prepared for all emergencies, sometimes

for more than is required of them—set themselves to work, and cause to be carried off, through some one or other of the emunctories, the superabundant fluid: the thinner the fluid, the more readily is their task performed. In the case narrated, when the tone of the system was elevated, it was not a little remarkable how very rapidly the extravasated fluid was absorbed. I have seen such an amount of fluid within a few hours absorbed and carried off through the kidneys as would exceed credibility.

As a proof of the share which impaired tonicity has in predisposing to hydropic effusions, I may mention the case of a patient admitted some years ago into Steevens' Hospital. He had been not long before discharged as convalescent from a fever hospital. His appearance was that of extreme wretchedness and destitution; he was paralyzed on the right side; the whole of the right side was one pellucid mass of dropsical effusion, pitting on the slightest touch. Along the left side there was not a trace of effusion, not even at the ankle or instep. When undressed, he presented as strange an appearance as ever met my eye.

I saw this day a gentleman, aged 65, whom I had seen several times within the last three months. When I first saw him both limbs were œdematous. There was effusion also into the infra-cutaneous serous membrane of the penis, scrotum, and abdomen,—the cause, obstructive disease of the heart. The right limb was swollen far more than the left, even at one time to double its size. He had, for years antecedently, chronic disease of the hip-joint, which issued in shortening and wasting of the limb. The heart's action has been rendered more tranquil; the effusion has been absorbed; a slight œdema at the ankle and instep of the wasted limb still remains.

I have seen cases of inveterate disease of the sciatic nerve in which atrophy of the affected limb was followed by œdema. Thus it happens that atonicity of the vascular tissue is one of the predisposing causes of atonic dropsy[a].

The atonic dropsy, of which we now speak, is most apt to arise in those forms of wasting disease which involve—in impaired function—the digestive apparatus. For example, there may be, and often is, chronic and ultimately fatal disease of the brain with paralysis, and all the while the patient eats largely and fattens. Many other instances might be adduced

[a] Sometimes the atrophy of a limb is caused principally by interruption to habitual muscular action. There are cases of paralysis in which the pulse of the paralyzed limb is weaker than at the sound side. Such are examples of lowered vascular force and contractility.

of both acute and chronic disease, not in the least involving the conditions necessary to the production of atonic dropsy.

The following case exhibits, distinctly featured, the variety of dropsy now under consideration. It is the only example of the disease described by me some years ago in this Journal, under the title of "Regurgitation without Nausea," that I have met with, of which dropsical effusion was a symptom.

An unmarried woman, twenty-three years of age, rather tall, with a light olive tint of skin, and dark hair, was three years ago affected with small strumous abscesses upon the wrist of the left hand; slow and tedious was the course they ran; they suppurated and cicatrized, leaving the characteristic marks. Scarcely had they cicatrized when she began, without the slightest nausea or sickness, to regurgitate her food. A very large proportion (her friends intimated all) of the food received at each meal was, portion after portion, without the least feeling of distress, returned. The daily regurgitation of a large portion of every meal had, for upwards of two years, persisted. Animal food, till within the last few weeks, had been loathed. All the usual garden vegetables were instantly regurgitated. Potato and egg remained not a moment. Except cream in very small quantity, no oleaginous article of diet was retained in the stomach. Bread in various forms, biscuits, and pea and bean flour, well cooked, seemed to suit the stomach better than other substantial articles of food. Broths and jellies were particularly disliked. For weeks the patient was almost wholly sustained by asses' milk: this too was ultimately loathed. No matter what the food, the daily regurgitation went on, much more of some than of other dietetic substances being ejected.

This case was not an exception to the general rule observable in this disease, namely, that whilst the food is regurgitated, medicine is retained.

Gradually, almost imperceptibly, she became emaciated, until at length she was reduced to a state of attenuation, as low as I have ever in the final stage of phthisis witnessed. The pulse a thread; the heart's sounds, emaciated as she was, barely audible; muscular power prostrated; mental energies reduced to nearly a state of apathy; deficiency of animal heat; chilliness and icy coldness of extremities. The bowels, except stimulated by aloes, never evacuated; the catamenia entirely suppressed; the renal excretion diminished in quantity, in quality normal. Such was the state of the patient when a slight œdema at the ankles was first perceived; rapid was its upward extension till it reached the knees and hips; greatly were the limbs

swollen; extravasation, undiscernible by the eye, was diffused over the trunk, and was detected by the sustained pressure of the stethoscope leaving a circular pitting or indentation. The transparency as well as softness of the œdema were not a little remarkable. Chalybeates were now given in very full doses, and did not fail to produce effects the most salutary. The advancing progress of exudation was arrested; nutriment was more abundantly received and digested; the œdema gradually abated, and after a time wholly disappeared. This patient was afterwards attacked with influenza fever, and bronchitis. For several days she was compelled to remain in bed; she was again greatly emaciated and debilitated. When she recovered, so far as no longer to be obliged to remain in the recumbent position, the dropsy partially reappeared; again it yielded to the same tonic and ferruginous treatment. Her recovery had now so much progressed that my apprehensions as to the existence of obscure glandular disease, involving, perhaps, the thoracic duct, were proved to be groundless.

In this example of general anasarca there were present all the causes which predispose to white blood effusions of the greatest tenuity; prolonged derangement of the digestive functions, wasting of the tissues, degeneration, and, as happened in this instance, diminution of the quantity of the circulating fluids, and atony of the vascular system. This was rendered manifest by the persistent smallness and weakness of the pulse, and by the continued feeble action of the heart. The result was dropsical effusion, and that too, as I believe, without any visceral disorganization. This case was not one of chlorosis; it was destitute of the essential features of this affection—not many cases of true chlorosis terminate in atonic dropsy. I have, however, seen cases of chlorosis which, in defiance of all treatment, have terminated in dropsy and death. But, in general, few diseases more unfailingly submit to well-directed treatment than chlorosis.

Of the following case, the notes of which I have long preserved, elucidative of the form of dropsy now under deliberation, I shall give a brief and much condensed statement:—

A young and beautiful woman, in the middle rank of life, highly but self-educated, of great mental endowment, of admirable taste, and strong sensibility and attachment, was, unconsciously, the one by whose hand a poisonous dose was administered to her sole surviving parent, to whom she was attached with all the fervour and devotedness of a daughter's love. The phial contained an ounce and a half of laudanum: it was given in mistake for a senna draught. When presented to him by his

daughter, he tasted it, and said he did not like it, and would not take it. He had not been in good health. It was with much entreaty he was ever prevailed upon to take the medicines prescribed. She urged him, in terms the most affectionate and persuasive, to take his draught. He replied, "Dearest, you know I never can refuse you anything," and swallowed it. Three hours passed away before she was aware of her terrible mistake. She was aroused to it by the perception of the state of stupor into which her father had fallen, when it flashed across her mind. She found the senna draught, which she intended to have given, untouched; she also found the word *poison* printed in large letters on the empty phial. The shock to her mind was terrific; she became like one insane. All possible means were employed to save the life of the poisoned man, but they were employed too late. He died profoundly comatose at the end of a few hours. From the moment of his last expiration a change came over her; she was lost to all knowledge or notice of persons and occurrences around; she lay like a statue, pale and motionless; food she never took, except when it was placed upon her tongue. The only sound which escaped her lips was a faint "yes" or "no." When asked what ailed her, she would place her hand upon her heart. Her extremities were cold; she sighed and shivered frequently, and dozed brokenly and protractedly. To her the world, and all things in it, were a blank. Tonics and stimulants were administered; air and scene were changed; kind and compassionate relations and friends tried, and tried in vain, to rouse and to console; she pined away, and nought but a breathing skeleton remained. She lingered on, with very little variety or alteration of symptom, for ten months. Before her dissolution she became œdematous. The swelling, soft and transparent, was first perceived in the lower extremities; it gradually progressed upwards; it became apparent on the backs of the hands, along the arms, and ultimately it was universal.

All the viscera, spinal, cerebral, thoracic, and abdominal, were patiently and minutely examined: no trace of organic change of structure could be detected. There was a copious effusion of thin, transparent serum into every cavity, into every serous tissue. The pericardium was separated from the heart by an abundant effusion; the large amount of the dropsical effusion contrasted strangely with the extreme attenuation. In this case, to repress the increasing dropsy, acupuncture had been several times practised, always with relieving effect; even with this deduction the viscera appeared, as it were, bathed in water.

This poor patient, beaten down in mind and body, breathed her last without a moan or a painful struggle. The mental shock had paralyzed the vital actions, an evidence that in real life events do occur which transcend even the highest flights of fiction.

An almost total suspension of nutrition, sanguification, and vascular energy, characterized this case. The result was universal dropsy, consisting in the thinnest serosity.

I shall transfer to these pages cases formerly published in my essay on chlorosis—cases in which life appeared to have been saved by acupuncture. They are precisely the kind of cases to which acupuncture can most safely and most curatively be applied.

Acupuncture removed the tension or vascular congestion which impeded the function of the absorbents: after its relieving action there was a copious flow of urine, a rapid subsidence of the dropsy, just as happens in that variety of dropsy (hereafter to be described) which has been termed obstructive dropsy.

In obstructive cardiac disease, the dropsy often increases despite the most powerful diuretic and cathartic medicines: one small bleeding from the arm suffices to alter the whole condition of the vascular system. The congestive tension of the vessels is removed; immediately the absorbents work, and the diuresis becomes profuse. The bleeding is adopted not at all with the view of subduing inflammatory action, but solely with the intention of unloading the congestion of the vessels, and giving full scope to the action of the absorbents.

For this valuable practical rule I am indebted to my late friend, colleague, and relative, Dr. John Crampton, who has, by lectures and publications, by useful suggestions in the treatment of disease, done very much to enhance the value and to enlarge the domain of clinical instruction and science in this metropolis. I shall have occasion again to revert to Dr. Crampton's published recommendation of bleeding in dropsy, and when and where it is applicable. The following cases are well calculated to illustrate the subject of the present investigation:—

"A married lady, aged 19, had been for several months labouring under gradually increasing chlorosis. Previously to her marriage she had looked pale and delicate, and had lost much of her accustomed health, strength, and spirits. Marriage, it had been expected, would have had a salutary effect; and for a short time, whilst travelling, her health appeared to improve. She again, however, became languid, de-

pressed, and pallid, and at length universally anasarcous. In this state I first saw her. She was confined to bed; her debility so great that it was with difficulty she could be moved; and her whole person was enormously distended. Her face was œdematous, but less so than every other part of her body; a copious serous effusion had taken place universally into the cells of the subcutaneous serous tissue. Her pulse was incalculably rapid, and so feeble that it was with difficulty it could be felt at the wrist. The heart's impulses were languid in the extreme, but unaccompanied by any abnormal sound. The respiration was permanently and greatly accelerated. The alvine excretions were liquid and of light yellow colour; she was so weak and helpless that she could not be placed on the bed-pan. The urine was light-coloured, not copious, of low specific gravity, but without a trace of albumen. A variety of treatment, both tonic and diuretic, had been in vain employed, and all hope of recovery abandoned; and yet there was no evidence of organic disease; the sole change which had taken place was in the blood itself. From the appearance of the skin, and from the slightness of the pressure necessary to displace the fluid, it was evident that the effusion was of the thinnest nature. Under these circumstances I thought this an unusually favourable case for acupuncturation. The operation was immediately performed; a great number of punctures were made, from which thin serum flowed copiously, and much care was taken to keep the patient dry and warm. Common salt was dissolved in water, to which the muriated tincture of iron was added; and of this as much was given, at regular intervals, as the stomach could easily endure; together with farinaceous nutriment and wine. On the next day the patient's condition was in every respect an improved one; the anasarca was diminished, the pulse more distinct and less frequent, the respiration less hurried, and the urine much increased in quantity. On the second day many additional punctures were made, and on the third day they were again repeated. After this day the greatly increased flow of urine, and the marked diminution of every urgent symptom, rendered it unnecessary to reiterate the operation. She gradually—I may truly say rapidly—recovered; her restoration was perfect; she became vigorous and even florid; she has borne several children; and many years have since elapsed, leaving her in the enjoyment of uninterrupted health.

"The next case I shall record is one of great interest,—a case of extreme anasarca, the result of anæmia, and without organic lesion, occurring in an hospital patient. He was

about thirty years of age, had never lived intemperately, and was superior to the generality of hospital patients in manner and education. His life had been spent in an office, at the desk, the nature of his occupation permitting him to take very little exercise. By long continued and frequently profuse bleeding from the hemorrhoidal vessels, he was reduced to a state of complete anæmia, and, owing to extreme debility, had been compelled to give up his situation as a clerk. When admitted into hospital he was universally anasarcous. The first signs of œdema manifested themselves in the lower extremities and face; his respiration was hurried; his pulse feeble and rapid; no murmur accompanied the cardiac movements, nor was there any auricular evidence of deposition in the pulmonary cells. The urine was scanty, low in density, and not albuminous. He remained for several days in hospital, and the symptoms not being in the least degree submissive to treatment, it was determined to give exit to the fluid by acupuncturation. Numerous punctures were made, during several successive days, in different parts of the body; the thin serum flowed freely; the anasarca subsided; the secretions became abundant; and the treatment ultimately issued in a complete restoration to health. His diet was gradually rendered more and more nutritious; he was allowed wine and malt liquor; and, after the operations, his medicines were iron and ammonia. I cannot avoid recording an emphatic expression used by this man. After having been twice acupuncturated, and when the serum was flowing profusely, I asked him how he felt? His reply was: 'Sir, I feel greatly relieved: when I was a boy, I wept from my eyes; now that I am a man, I weep from my whole body.'"

I also append the following observations, which were originally published with these cases, as they illustrate remarkably my present subject:—

"These cases illustrate the circumstances under which the operation of acupuncturation may be most advantageously employed; indeed the only circumstances which give to it a permanent value. It may often be practised usefully as a palliative: rarely, however, is it a curative measure. In dropsy from organic disease it removes the tension, and enables the blood to circulate more freely, so that the medicines may act, and the effused fluid be absorbed; but the organic disease remains, and the dropsy returns. In the foregoing cases there was no organic lesion, either cardiac, pulmonary, hepatic, splenic, or renal. The tension being removed, and the medicines enabled to produce their full effect, the serous effusion

was absorbed, the constitution invigorated, the quality of the blood improved, and the cure rendered perfect. Far otherwise is it in those vastly more numerous cases of dropsy, resulting from morbid change and deposition in organs essential to life; in many of these, acupuncture is an useful adjuvant in the treatment, but it cannot remove the cause of the effusion.

"Trifling as this operation is, I have seen it followed by consequences the most disastrous,—erysipelas and gangrene. In advanced cases of dropsy, when the blood is much altered,—all but disorganized,—it is dangerous to puncture the skin. I have also seen cases in which, from the perpetual oozing of cold serum, the broken-down state of the health and of the blood, each puncture has been followed by a large and foul ulcer. In other instances of hopeless dropsy, even though the patient escape these grave consequences of acupuncturation, the limbs have been kept so constantly wet and cold as greatly to distress the patient and aggravate his sufferings. It requires, then, observation and judgment to distinguish the cases in which this remedy may be safely and successfully employed. It may be here remarked, that the more limpid and less dense the effusion, the more favourable is the case for acupuncturation. I have observed many cases of anasarca resulting from organic renal disease, wherein it required strong pressure to produce a pit or dimple; nay more, the limbs have been so rigid as to render the joints immovable, such has been the density and solidity of the matter which occupied the subcutaneous serous tissue.

"I saw, some years ago, in consultation with Sir Philip Crampton, a very remarkable case of anæmic dropsy: the patient was about thirty-five years of age; he had been reduced by long-continued and profuse hemorrhoidal bleeding to a state of extreme anæmia. The prominent symptoms were, death-like pallor, excessive debility, languor, constant dyspnœa, occasional orthopnœa, bellows murmur of the heart and arteries, universal anasarca, and peritoneal effusion. Sir P. Crampton, by an operation, put an end to the sanguineous exudation; whereupon a rally took place; and then tonics, diuretics, moderate stimuli, and nutritious diet, completed the cure."

Repeatedly I have witnessed the interesting phenomenon of red and white blood extravasations co-existing at the same time and in the same person. This occurs in purpura hæmorrhagica: the white blood extravasation, indicating the ruined state of the blood, takes place at an advanced state of the disease, and points but too surely to a fatal issue; whilst blood in its entirety is oozing in all directions from mucous surfaces, and

staining with spots and ecchymoses the skin under the cuticle; the white portion of the blood, reduced to a state of the utmost tenuity, is occupying and distending the spaces of the serous membranes, both under the external skin and in the serous sacs or surfaces involving the internal viscera. The one from the mucous outlets generally escapes, whether the red blood flows from the nares, or intestines, or bronchi, or bladder, or vagina; after extravasation, it is expelled from the body —not so with white blood extravasation—into serous tissues. It is pent up; it cannot find immediate exit; hence the necessity of effecting its removal from the body, either by absorption, or by ulceration, or by instrumental operation.

The cases hitherto recorded have reference to *blood*, not to *visceral* disease. Of atonic dropsies, the first variety is the most amenable to treatment.

Dropsy, always formidable, assumes its most fatal aspect when linked with visceral disorganization. In such cases, though it may often be removed, yet, the cause remaining—probably increasing in intensity—it will again and again recur; and this harbinger of dissolution at length refuses to yield to treatment, however varied. It often, however, claims the first and most important place in the adaptation of remedies. Hence the great variety of substances derived from the mineral and vegetable kingdoms which, possessed of diuretic properties, are earnestly sought after. It is a fact that diuretics must be varied: those which to-day are eminently successful will on a future day grievously disappoint expectation. Amongst diuretics, mercury holds and maintains the first place. There is, perhaps, no combination of medicine more frequently or surely to be relied upon than the diuretic compound judiciously administered—consisting in mercury, squill, and digitalis.

I shall not multiply cases of atonic dropsy, resulting from intractable and destructive morbid action, affecting an important viscus, the normal functions of which are essential to the preservation of life. The *permanent* cure of dropsy depends upon the removal of its cause. If all treatment fail to remove the cause, the symptom, dropsy, will resist all efforts directed towards its *permanent* cure. It may often be temporarily removed, but if the cause remain, as surely as the tide which ebbs will flow again, so surely will the dropsy, if the patient still linger on, re-appear.

A case has but lately fallen under my observation of protracted disease of the alimentary canal: it terminated, after a

long illness, fatally. For many weeks all solid and substantial food was rejected by vomiting: no articles of diet were retained except those which are lowest in the scale of nutrition, and, like an infant's food, in a highly liquid state; there was also a perpetually recurring diarrhœa. About a fortnight before the fatal termination of the disease, œdema, manifesting the signs of the thinnest serosity, appeared, though the patient had been previously, and was then wholly confined to bed, and always in the recumbent position, in the lower extremities: first, at the insteps and ankles, and, advancing hourly, reached the hips, and extended along the most dependent parts of the trunk. The dropsical distention was very great, and particularly in the lumbar region. In the superior extremities and anterior parts of the trunk, though present, it was less discernible. No doubt could exist that there was in this case organic disease of the stomach and extensive ulceration of the intestines. Everything essential to the production of atonic dropsy was in this case present.

Yesterday I took a brief note of the following case:—A gentleman, aged 64; his countenance expressive of malignant disease; food received into the stomach seems to himself not to descend; immediately on being swallowed it is rejected by vomiting; he is thus for the time relieved; the vomiting, at first slight, has lasted for four months; he is greatly emaciated; hiccups frequently; feels most easy when in bed; great debility referred chiefly to limbs; pulse very small; heart sounds feeble; urine natural; bowels regular; a soft, semi-transparent œdema fills up and distends the lower extremities, reaching half-way up the thigh.

To these many such like cases might be added. It is needless: they tend to confirm the view already put forward—namely, that the cases most apt to terminate in atonic dropsy are those which involve in morbid action the alimentary canal and its appendages.

Some persons are constitutionally, from temperament, liable to serous effusions. With such, a smaller amount of disease is capable of producing dropsy; at an earlier stage of a malady it will set in; moreover, the catastrophe of an hydropic effusion may, by general management, be either precipitated or retarded, or even averted. If the diet be well suited to the enfeebled digestive function; if the heart be not unduly stimulated by ardent liquors, by mental emotions and passions, by muscular exertions, and other such causes; and if quiet and recumbency be sufficiently maintained, these dropsical effusions may be

postponed, or possibly even averted. Influenced by an opposite mode of management and treatment, it may be accelerated. This remark is applicable only to some forms of dropsy.

The rapidity with which I have sometimes observed a large effusion in a poor hospital patient to be carried off has surprised me. The influence of new and unaccustomed circumstances, the altered diet, the quiet and recumbency, have appeared to have been mainly instrumental in effecting this great alteration in the functions of the vascular system.

Some weeks ago a poor woman, affected with aneurism of the arch of the aorta, was admitted into Steevens' Hospital. The tumour pulsated vehemently and prominently. She suffered intensely from neural pains, shooting from the sternum to the spine, and along the left arm. She remained several weeks in hospital, and, feeling herself much relieved, she returned home. At the end of a month she was re-admitted. In the interim copious effusion had taken place into the infra-cutaneous serous tissue of the thorax and arm, on the left side. Whilst at home she was stinted in food, and it was not only scanty but coarse; she was also obliged to work. After her re-admission she remained quiet and recumbent, and her diet was carefully regulated. Scarcely had ten or twelve days elapsed until every trace of the effused fluid had vanished. It had so happened that the medicine ordered for her she had not taken.

In the cure of dropsy, treatment should not be restricted to medicine; systematic and dietetic treatment should never be neglected. I have said that dropsical effusions are influenced by temperament; it is also true that they are influenced by previous habits and manner of living. As far as my observation has reached, I should be disposed to assert that those *sudden* effusions into the ventricles of the brain, and also those into the pleural and peritoneal sacs, which occur in cases of renal, and sometimes in cardiac, diseases, are much less likely to occur in the atonic than in the obstructive and inflammatory varieties of dropsy.

This section of the subject shall here be brought to a close: a few pages of a future Number of this Journal will, I hope, be devoted to the investigation of the causes of obstructive dropsy.

Art. II.—*On Extirpation of the entire Upper Jaw, illustrated by a Case in which it was removed, together with the whole of the Palate Bone, on account of a large Fibro-vascular Tumour springing from the Antrum.* By Richard G. H. Butcher, F.R.C.S.I., Surgeon to Mercer's Hospital, Member of Council of the Royal College of Surgeons in Ireland, and Examiner on Anatomy, Physiology, and Pathology thereto for the past five years, &c. &c.

There are certain forms of disease affecting the cavity of the antrum, as well as others springing from its walls, and involving the osseous tissue, which call for the operative interference of the surgeon, and demand the removal of the upper jaw, either in part or in its totality. I allude more particularly to various morbid growths and tumours, characterized as fibrous, cartilaginous, encephaloid, fatty, erectile, or osseous, in their nature. It is true, that all do not run to a fatal issue with the same rapidity; but it is equally certain that the most benign in character may, by enlargement, produce such an impairment of, and pressure upon, the surrounding organs and textures as must ultimately prove fatal.

The operations on the upper jaw may, in reality, be classed under two heads,—that of the exsection and that of the disarticulation of the bone; and this I conceive to be a wholesome division of the subject, for by it may be cleared up the discrepancy which prevails amongst writers, relative to the priority in this operation claimed by illustrious surgeons.

Years ago, so far back even as 1693, a part of the upper jaw was removed by Akoluthus, a physician at Breslau. He being consulted by a woman who had a tumour on the jaw which followed the extraction of a tooth, enlarged the mouth with a cut, removed part of the swelling, together with four teeth, but not being able at once to get completely round it, he attacked it several times at intervals of a few days, sometimes with cutting instruments, and sometimes with the actual cautery, and at last succeeded in curing his patient[a].

Planque mentions a case of sarcoma, the size of two fists, in which the cheek was divided to excise the tumour, and two or three teeth, and a portion of the corresponding bone, were removed with it. The patient recovered.

The scooping operation was likewise put in practice by Desault, Garengeot, Jourdain, and others, and has been in modern times more especially brought under notice by Dupuytren, in

[a] Mémoires de l'Académie Royale de Chirurgie, tom. v. 1819.

1820, and since then by many surgeons. The latter distinguished pathologist even went further, and argued that the greater part of the jaw might be excised; and he was induced to form this opinion from the consideration of the examples on record, where the patient recovered after most severe mechanical injuries of the face, and necrosis, occasioning the destruction of the bone. A most remarkable instance, where the jaw came away almost entire in this latter affection, is mentioned by Camper, and the patient survived. Dupuytren, though he did not remove the entire bone on the date above mentioned, at all events cut out the greater part of it in 1824; yet, too, in the practicability of this operation he was anticipated by Desault and Bidloo, who, however, confined themselves to recommending, without ever having, as it appears, performed it. That Dupuytren did not remove the whole jaw, or, in other words, disarticulate it, is proved by Gensoul, who says:—"I saw the two practitioners, Sanson and Pinel Grandchamp, who were stated to have witnessed these operations, for the purpose of knowing what method had really been adopted. Sanson informed me that he had no knowledge of the fact of an entire removal of the superior maxillary bone, and that he knew only of the operation performed in 1820, which was similar to Desault's, and of one other in the year 1824; and that in the latter case a large piece of the edge of the alveolar process had been removed with a small saw. Pinel Grandchamp said he had witnessed the two operations mentioned by Sanson, but he had never heard say that Dupuytren had ever thought of removing the whole superior maxillary bone"[a]. M. Pillet corroborates this testimony, for he states, the patient last operated on by Dupuytren died at Saltpetrière, and on examination a portion of the jaw was found left behind[b].

The nearest approach to the removal of the whole superior maxillary bone is detailed in "White's Cases in Surgery." It was operated on successfully by his father, and he relates it in the following manner:—"The patient was a woman, afflicted with a tumour betwixt the zygomatic process and the nose, arising from the lower part of the orbit of the left eye. It pressed the nostrils to one side, so as to stop the passage of the air through them, and thrust the eye out of its orbit, so that it lay on the left temple, yet, though thus distorted, it still performed its office. The tumour occupied the greater part of the left side of the face, extending from the lower part of the up-

[a] Lettre Chirurgicale sur quelques Maladies graves du Sinus Maxillaire et de l'Os Maxillaire Inférieure. Paris, 1853.

[b] Lancette Française, Tom. ii. p. 284.

per jaw to the top of the forehead, and from the farthest part of the left temple to the external canthus of the eye. It had an unusual and equal bony hardness. It was of a dusky livid colour, with varicose veins on the surface, and there was a soft tubercle projecting near the nose, where nature had endeavoured, in vain, to relieve herself." For the removal of the disease, he continues:—"I began with a semicircular incision below the dislocated eye, in order to preserve that organ, and as much as possible of the orbicular muscle; then carrying the incision round the external part of the tumour, I brought it to the bottom of it, and then ascended to the place where I began, taking care not to injure the left wing of the nose. After taking away the external part of the tumour, which was separated in the middle, by an imperfect suppuration, there appeared a large quantity of matter, like rotten cheese, in part covered by a bony substance, which, however, was so carious as to be easily broken through. I scooped away abundance of this matter, with a great many fragments of rotten bones. Upon cleansing the wound from blood and filth with a sponge, I found the left bone of the nose and the zygomatic process carious, and easily removed them with an elevator. There were no remains of the bones composing the orbit of the eye, which were plainly destroyed by the same disease. The optic nerve was denuded as far as the dura mater; and the dura mater and pulsation of the vessels of the brain were apparent to the eye and touch. The left superior maxillary bone, in the sinus of which this disease had its origin, and remained a long time concealed, was surprisingly distended, and in some places became carious; it had exfoliated from the lower part to the sockets of the teeth, which part was, in like manner, removed. I applied the actual cautery to the rest of the bones and putrified parts, taking care not to injure the eye and neighbouring parts which were sound. The patient drew her breath through the wound, and was so incommoded by the fetid matter flowing into her throat, that she was obliged, for several weeks, to lie on her face to prevent suffocation. . . . The patient recovered, the eye returned to its place, and she enjoyed the perfect sight of it"[a].

There can be no doubt that Mr. Lizars, of Edinburgh, is justly entitled to the credit of having, in 1826, proposed the *entire removal* of the superior maxillary bone, and of explaining the proceedings for its accomplishment. Speaking of "polypi, or sarcomatous tumours, which grow in the antrum," he says: "All the cases which have come within my knowledge (with the

[a] Page 135, *et seq.*

exception of one) wherein these sarcomatous tumours have been removed by laying open the antrum, have either returned or terminated fatally. I am, therefore, decidedly of opinion, that unless we remove the whole diseased surface, which can only be done by taking away the entire superior maxillary bone, we merely tamper with the disease, put our patient to excruciating suffering, and ultimately to death. The inferior maxillary bone has now been nearly entirely removed for osteosarcoma with success, and I see no difficulty in accomplishing the same with one of the superior maxillary. We secure the common carotid artery for other tumours of the face, and for aneurism by anastomosis, and why not do it for so loathsome and fatal a disease as this? The steps or plan of the operation I would suggest for so fatal a disease are,—first, to secure the trunk of the common carotid artery of the affected side; next, to make an incision through the cheek, from the angle of the mouth backwards or inwards, to the masseter muscle, carefully avoiding the parotid duct, then to divide the lining membrane of the mouth, and to separate the soft parts from the bone, upwards to the floor of the orbit; thirdly, to detach the half of the velum palati from the palate bone. Having thus divested the bone to be removed of its soft coverings, the mesial incisive tooth of the affected side is to be removed; then the one superior maxillary bone to be separated from the other, at the mystachial and longitudinal palatine sutures, and also the one palate bone from the other at the same palatine suture, as the latter bone will also require to be removed either by the forceps of Mr. Liston or a saw; thirdly, the nasal process of the superior maxillary bone should be cut across with the forceps; fourthly, its malar process, where it joins the cheek bone; fifthly, the eye, with its muscles and cellular cushion, being carefully held up with a spatula, the floor of the orbit is to be cleared of its soft connexions, and the superior maxillary bone separated from the lachrymal and ethmoid bones with a strong scalpel. The only objects now holding the diseased mass are, the pterygoid processes of the spheroid bone, with the pterygoid muscles. These bony processes will readily yield by depressing or shaking the anterior part of the bone, or they may be divided by the forceps, and the muscles cut with the knife. After the bone with its diseased tumour has been removed, the flap is to be carefully replaced, and the wound in the cheek held together by one or two stitches, adhesive plaster, and bandage. In no other way do I see that this formidable disease can be eradicated"[a]. The

[a] A System of Anatomical Plates, &c. Part xx —The Organs of Sense. 1826.

foregoing operation, which Lizars proposed, he made the attempt to perform in December, 1827, and he thus mentions it:—"I attempted to remove the bone for a medullary sarcomatous tumour of the antrum, from a miner or collier, after securing the common carotid artery of the affected side, but I was prevented by the hemorrhagic disposition of the gum and palate, my patient having lost in a few seconds upwards of two pounds of blood, which welled out at every incision as if there had been an an aneurism by anastomosis. The man survived this attempt seventeen months"[a].

Though Lizars first proposed the operation, M. Gensoul, Surgeon to the Hotel Dieu, at Lyons, was the first to perform it. He removed every part of the superior maxillary bone, together with the whole of the palate bone, from a boy aged 17, on the 26th of May, 1827, for a large fibro-cartilaginous tumour, "occupying the whole left side of the face, and pushing to one side the orifice of the mouth; it extended from above downwards from the floor of the orbit to two lines above the chin, from before backwards, from the nose, which was thrust to the right, to the top of the angle of the inferior maxillary bone." Gensoul states, he was not aware what method Lizars had recommended[b], but was induced to operate for the following reasons:—For several years previously he had known patients die of very tedious operations, undertaken for the removal of cancerous and other tumours of the antrum. Reflecting on the fate of these unfortunate individuals, he was led to conclude that others, labouring under similar diseases, might be cured by an operation, which consisted in freely denuding the antrum and upper jaw-bone, so as to be able to divide the sound parts, instead of meddling with the diseased ones, and of searching for the precise limits of the disease in the midst of blood and the remains of the affected textures. In short, he was induced to think, that the same principle should be acted upon in this operation, as is followed in others, undertaken for the extirpation of cancerous tumours in general. In this remarkable case, Gensoul did not first tie the carotid artery, as advised by Lizars, but made a vertical cut, from the inner corner of the eye directly down through the upper lip, opposite the left cuspid tooth. From the middle of this cut, or, rather, nearly on a level with the floor of the nose, he made a second, up to four lines from the front of the lobe of the ear, and a third cut, beginning five or six lines to the outside of the orbit down to the

[a] Lancet, 1829–30.

[b] Lettres Chirurgicales sur quelques Maladies graves du Sinus Maxillaire, &c. p. 18.

end of the second and third cuts, and then turned the flap up to the forehead. But, for the purpose of completely exposing the tumour, he was obliged to continue, from the junction of the second and third cuts, another along the inner edge of the masseter muscle, to within an inch of the base of the lower jaw, and this lower flap he turned down. He then commenced with a chisel and mallet, cutting through the outer margin of the orbit, near the suture connecting the malar and frontal bones, into the spheno-maxillary fissure; and next, cut through the zygomatic process of the malar bone. The maxillary bone being thus freed externally, he placed a very broad chisel below the inner angle of the eye, and carried it through the lachrymal bone and the orbital plate of the ethmoid; and in the same way detached the corresponding part of the nasal bone. Cutting away, with a bistoury, all the soft parts connecting the wing of the nose to the upper jaw, he proceeded to separate the two superior maxillary bones, which he effected easily and quickly, having drawn the first left incisive tooth, by introducing a chisel, not directly from before backwards, but by wriggling it through the mouth. Lastly, to detach the maxillary bone from the pterygoid processes of the sphenoid, and to destroy any connexions with the back of the ethmoid still remaining, he thrust the chisel into the tumour, passing it obliquely in the orbit, so as to cut through the superior maxillary nerve, which he was anxious not to drag, and pushing it sufficiently deep to form a lever, so that he could turn the tumour down into the mouth. This answered very well, and he had then only to divide, with curved scissors and bistoury, the attachments of the bone to the soft palate, so as to leave the latter unharmed. The operation was scarcely concluded when the patient fainted, but revived on being laid upon his bed. This patient perfectly recovered.

Lizars, though being disappointed in carrying out his views in 1827, yet was not discomfited, and on August 1st, 1829, he performed his second operation. He first tied the trunk of the temporal and internal maxillary arteries, and also the external jugular vein, which had been divided in the first incision. He cut through the alveolar process and bony palate on the left side of the palatine suture, and completely separated the upper jaw with the saw, Liston's forceps, and strong scissors, but the orbital plate was separated from the eyeball by the handle of a knife. The tumour was medullary sarcomatous, and a portion of it, attached to the pterygoid process of the sphenoid bone, could not be detached, but part of the malar bone involved in the disease was removed. On the sixteenth day the

wound had healed, and she left the house on that day. Three days after, she expired suddenly, but no examination was permitted"[a]. Lizars' third and successful operation was performed on January 10th, 1830, on a woman, the external carotid artery having been first tied. After slitting up the nostril, making a flap of the cheek, and divesting the bone of its coverings where it was to be sawn through, he applied the saw on "the front of the superior maxillary bone, between the nostril and the mouth, or at the side of the mystachial suture; on the palatine plate backwards from this, parallel with the longitudinal palatine suture, to near where the transverse palatine suture exists; across the same palatine plate towards the bulbous process upwards, between the bulbous process and the pterygoid processes of the sphenoid bone, across where it joins the cheek bone; and, lastly, at its nasal process, parallel with the inferior margins of the lachrymal and nasal bones. I then, with strong scissors, cut the connexions of the orbitary process of the palate bone deep into the orbit, to the spheno-maxillary fissure, and was lastly able, by notching with the bone forceps at every point where the saw had been, to remove the entire bone, which had its cavity filled with a firm sarcomatous tumour. The patient was able to walk about her room on the eighth day, and went out to take an airing on the thirtieth day; and she left the hospital on the 5th of March following"[b].

From a dispassionate consideration of the subject, I have no doubt Mr. Lizars is to be regarded as the originator of this operation, the propriety of performing which, in certain cases, is abundantly borne testimony to by the experience of modern times; and in conjunction with his name I would associate that of the illustrious Liston, to whom we are indebted for a discrimination of the cases in which the operation may with propriety be undertaken[c]. Indeed, in this special department of our art, he has, in a marked way, left the impress of both his labour and his genius. To the list of names already mentioned, Lizars, Dupuytren, Gensoul, Liston, and White, we may likewise add those of Syme, Robert, Mott, Velpeau, Lisfranc, Dieffenbach, O'Shaughnessy, Heyfelder, Fergusson, and Cusack, as most closely associated with this bold procedure of modern surgery, and prominently conspicuous in its advocacy, both by precept and by practice. The following case, in which I extirpated the entire of the upper jaw, together with the whole of the palate bone, adds another to the list of those on record which have been successful.

[a] London Medical Gazette, vol. v. p. 92. [b] Lancet, 1829–30.
[c] On Tumours of the Mouth and Jaws. Medico-Chirurgical Transactions, vol. xx.

Patrick Higgins, aged sixteen years and six months, was admitted into Mercer's Hospital, under my care, March 1, 1853. The patient stated that a polypus had been extracted from his right nostril nine months before admission, but as to the time of its commencement he was entirely ignorant; he could only affirm with confidence, that for three months before the operation the tumour projected into the nose, and interfered with free respiration. He then applied to a surgeon, who removed the growth with the ordinary polypus forceps: during the time of extraction, and afterwards, there was profuse bleeding. The morbid growth had been removed scarcely a month when it again appeared, and manifested a more rapid tendency to increase, which gradually progressed up to the date of his admission. On the closest interrogation, little information could be obtained as to the earlier symptoms that ushered in the local affection. True it is, the patient could remember the presence of a dull, aching pain constantly fixed over the right brow, and of a more acute, severe, and lancinating character beneath the under eyelid. These symptoms, together with the blocking up of the nose, were the inconveniences which urged him to seek for surgical advice, when the operation referred to was put into execution with temporary relief. On the re-growth of the tumour, the patient was brought a considerable distance from the country, and placed under my care. At this time his condition was exactly as follows:—The features were greatly distorted; the right superior maxillary bone being rendered prominent by expansion of its walls, owing to pressure exerted from within; the soft parts comprising the cheek were not discoloured, yet considerably thinned and rendered tense over the projecting part; handling the tumour, and even pressure, did not elicit pain, and there was total absence of all œdema. The symmetry of the eye was lost, the lower lid being raised above the level of that upon the sound side, and the entire organ was somewhat elevated from its bed by the displacement upwards of the floor of the orbit; the lachrymal secretion was profuse, the nasal duct obstructed, and, as a sequence, the tears constantly flowed over the cheek; the nose was expanded and pushed to the left side,—a derangement which will partly account for the eyelid not descending properly; a large, fleshy mass occupied the right nostril, and filled the cavity to its external margin; this anterior part of the tumour was of a dark colour, and coated with a thin crust, yielding in abundance a thin, ichorous discharge; it was soft, elastic, and bled on the slightest touch; and so forcibly was pressure exerted by the

growth of the tumour towards the mesial line, it was sufficient to destroy the bony septum, and block up the left nostril also; the cartilage constituting the anterior part of the partition being spared, doubtless owing to its elasticity, was forced over, and by the bulk of the growth retained in apposition with the left ala, so as to occlude the anterior aperture of the left nasal cavity also; a probe could be made to traverse in an arch over the superior surface of the tumour, but was instantly stopped, both internally and externally,—externally, by the growth protruding from the antrum, and internally or mesially by the irregularity of the surface. By careful manipulation a bent probe could be insinuated beneath the tumour and carried along the floor of the right nostril, and made to appear below the edge of the soft palate. Within the mouth, the tumour could be detected taking a backward direction, pressing down the entire hard palate, and projecting into the pharynx, forcing the velum downwards and forwards, thus placing it almost vertically; in this acquired position the growth could be distinctly felt, and on palpation was obviously elastic; there was no pain occasioned by the handling of it, though the mucous membrane over the entire region was preternaturally coloured, presenting, in many points, patches of ramiform vascularity; the alveolar ridge was perfect, and the teeth were not loosened; respiration and deglutition were considerably interfered with, owing to the obstruction in the nostrils and the projecting mass in the pharynx.

From a very careful inspection and consideration of the case, I at once came to the conclusion that no temporizing measures would avail, because the jaw bone itself was implicated, and the tumour had its root and origin within the antrum, filled the cavity, expanded its osseous walls, and, finally, burst from its confinement, and threatened life by an interruption of functions essential to existence; therefore the removal of the upper jaw in its totality promised the only chance of permanant relief. The patient had been in hospital only a few days when a rapid change in his condition urgently called for operative interference. The tumour suddenly increased with almost incredible rapidity; all its surfaces seemed to participate in the enlargement, but posteriorly the change was most alarmingly felt: the tumour was now plainly visible below the soft palate, and so far interfered with respiration that the sufferer could not lie down without experiencing a sensation of smothering, or obtain any sleep without being almost instantly awakened by a feeling of suffocation and painful gasping for breath. The power of deglutition was likewise

interrupted; fluids could only be swallowed, and that very sparingly, even in sups. My proposal to extirpate the jaw was acquiesced in by my colleagues, Messrs. Tagert, Jameson, and Bevan, and sanctioned by the high authority of Mr. Cusack. The operation was performed in the following manner, March the 5th, 1853:—

The patient being seated on a chair, with his head resting on the breast of an assistant, I passed a strong, curved bistoury, guarded on my finger, into the mouth, thrusting out the point a little external to the junction of the malar and maxillary bones on the right side, and slit the cheek from this point downwards to about a few lines in front of the angle of the mouth; I then, with a scalpel, continued the incision from the point where the bistoury first appeared, a short way upwards and outwards. The knife was next applied half an inch below the inner canthus of the eye, over the nasal process of the maxilla, and carried down at the side of the nose, round the ala, and then straight through the upper lip. The flap thus formed was rapidly dissected up from its attachments and held by an assistant, the orbital edge of the maxilla was cleared from the soft parts, and the attachment of the inferior oblique muscle accomplished; thus it, together with the nasal process and the anterior part of the malar bone, lay fully exposed. At this stage, the flow of blood was so profuse it was considered advisable to secure the facial artery at the point where it was divided in the outer incision, and likewise the transverse facial on the same side: the facial artery on the left side was commanded by pressure, where it passes round the jaw in front of the masseter muscle. The cartilage of the ala was next detached from the bone, and the nose drawn over to the left side. The division of the osseous structure was next accomplished, by means of a powerful scissors: the malar bone, at its junction with the maxilla, was first cut through; then the nasal process of the maxilla divided; next, the first incisor tooth being drawn, one blade of the scissors was passed into the nostril on the affected side, the other into the mouth, and the palate plate severed, through its entire extent, from its fellow of the opposite side; the incision passed in a straight line from the gap occasioned by the extraction of the tooth to the posterior edge of the palate plate of the palate bone, where the tumour lay in contact with it. I then, with a strong, curved scissors, cut across the orbital plate, from the orbital margin of the maxillary bone, leaving a small portion of the floor of the orbit perfect, and by a careful stroke of the knife detached the ve-

lum pendulum from the palate bone. The maxilla was next grasped with a strong forceps, and forcibly pressed, so as to break down its connexions behind, and make the tumour start from its bed: thus the entire mass was depressed, and drawn forwards by the aid of the forceps held in the left hand, while, with the index finger of the right passed in above the tumour, extensive adhesions were torn through; and, by a few additional touches of the knife, the entire mass was liberated from its attachments and taken away. The mouth was next sponged out, and very carefully examined: not a portion of the tumour remained behind. The hemorrhage after was very inconsiderable, and yielded to the pressure exerted by small pieces of dry sponge thrust against the surface, each being guarded with lint and a string; the former to prevent the granulations shooting into its structure, and the latter to facilitate removal. Additional pieces of lint were introduced, so as to fill the cavity, and prevent the cheek sinking too much in. The patient was then placed in a recumbent position; nevertheless, syncope supervened, in consequence of the shock, and loss of blood necessarily resulting from so formidable an operation. However, by the application of ammonia to the nose, the admission of fresh air, and the administration of wine, this faintness passed away, and the heart and brain resumed their functions. After this pause I proceeded to dress the wounds, by most carefully adjusting the cut surfaces, and retaining them in apposition by several points of the twisted and interrupted suture: thus was the dressing completed,—neither pledgets, plasters, nor bandages being had recourse to. Immediately afterwards, the patient was removed into a private ward, put to bed, and a warm anodyne administered.

3 P. M.—The patient had sound sleep since morning,—the fatigue, anxiety, and restlessness which he endured for two nights before the operation will partly account for the occurrence,—and he took, with appetite, a quantity of boiled milk, and eggs beaten up in it, for nourishment.

March 6th.—Sleep was procured at intervals during the night. He suffers but little pain. Pulse quiet and compressible; skin soft; urine passed in considerable quantity; face but little swollen, and neither uneasiness nor tension in the site of the sutures. The patient was made to lie upon his left side, so that the profuse salivation might escape without interrupting the adhesion of the cut parts. Boiled milk and eggs to be liberally supplied, and also a pint of strong beef-tea.

2 P. M.—Pulse quickened; general restlessness; skin hot;

symptoms evidently ushering in irritation. Ordered small doses of a sedative mixture, containing camphor julep, morphia, and prussic acid.

9 P. M.—Pulse lowered considerably, and quiet; refreshing sleep has been obtained for a short time. Ordered to continue the mixture at longer intervals, and to be allowed warm milk for drink through the night.

March 7th.—Slept almost uninterruptedly for the entire night. Pulse 90, and soft; skin cool. The wounds in the cheek seem united; there is but little swelling in their course, and the sutures are quite unproductive of irritation. The eye is perfectly on a level with the sound one, and the lid has resumed its proper position. There is slight fetor of the breath, occasioned by the presence of the plugs at the back of the pharynx (there now for forty-eight hours), which called for their removal; this was easily effected by the injection of a little tepid water and gentle traction.

9 P. M.—Free from pain, and inclined to sleep.

March 8th.—The patient slept composedly during the early part of the night, and at intervals towards morning. Pulse quiet. Complains of a slight headach; face a good deal swollen, but no undue traction on the sutures; bowels confined. Ordered immediately a full emollient enema. I carefully sponged out the pharynx and mouth with a wash, containing chloride of soda. Eggs, beef-tea, &c., for nourishment. Salivation still very profuse.

9 P. M.—Patient slept nearly the entire day, and is free from pain.

March 9th.—The young man feels much refreshed after the night, and is most anxious for solid food; he can speak sufficiently distinct to be understood and make known his wants. His request I did not think it prudent to comply with, lest any portion of the solid matter might become entangled in the irregular surface behind, and so bring on a fit of coughing, and thus tear asunder the recently united parts. The wounds of the face are all united by the first intention, nevertheless, the sutures being unproductive of irritation were suffered to remain. Eggs, milk, beef-tea, &c., for nourishment, as before.

March 10th.—Removed all the sutures, and supported the parts with broad strips of adhesive plaster. The surface of the chasm left after the removal of the bone granulating healthily.

March 15th.—The patient was allowed to take solid food for the first time this day. The incisions in the cheek are not only united, but quite pale and nearly obliterated, and the

surface on the interior is rapidly healing. On this day he was permitted to get up.

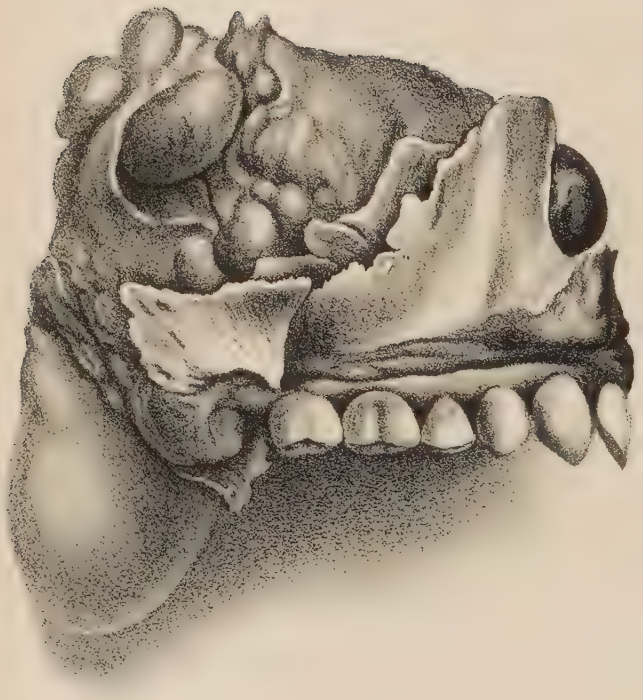
March 18th.—There has been a rapid amendment in the young man's condition: his speech and power of deglutition are greatly improved, and the salivation is considerably diminished. Brushed over the interior of the mouth and granulating surface with a solution of nitrate of silver, ten grains to the ounce.

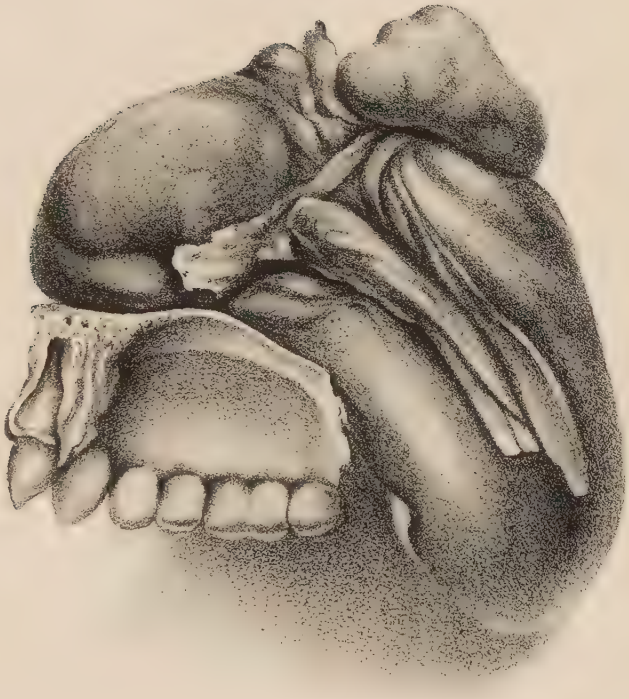
It is unnecessary to follow up the daily report of the case any further; suffice it to say, that in a short time the parts were entirely healed, and he was dismissed perfectly cured.

At the time in which I write (May the 24th) the patient is in excellent health. Very little deformity marks the severe operation which had been performed: the gap left by the removal of the maxilla has contracted remarkably in size; the power of swallowing fluids and solids is naturally restored; and his speech and articulation are sufficiently distinct for a person in his humble position in life.

I regret not being able to present the reader with a drawing of the patient before the operation. The case so unexpectedly demanded immediate interference, time was not permitted for its execution, but the accompanying lithographs (Plates 1 and 2) exhibit a full-sized representation of the parts removed. Plate 3 is taken from a portrait which was drawn six weeks after the operation, attesting to the fact of the little amount of deformity consequent upon it.

Examination of the part after removal.—The structure of the tumour presented many interesting peculiarities. Its attachment and origin sprung from the outer part of the antrum. Not only was it incorporated with the lining membrane, but it likewise implicated the osseous wall. The surface from which it sprung, in the recent state, was softened, vascular, and pulpy; the upper surface of the tumour was lobulated where it encroached upon the orbit and elevated its floor; the lobules were of various sizes—some very small, but each consistent in structure, and invested by a dense capsule in a similar way to the larger masses of the growth. The entire tumour was remarkable for its great vascularity, which was more particularly confined to the posterior and upper surface; while on section the structure was dense by comparison, pale, eminently firm, and partaking of a fibrous, matted nature. This integral arrangement was very manifest under close examination with the microscope, and cleared away the suspicion which, on superficial inspection, might have been created of encephaloid disease being the synonyme most applicable to the growth.





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There was a total absence of all nucleated cells, either globular, caudate, or spindle-shaped; and above all, the section of any part only yielded a minute quantity of serum or blood on pressure, and not the true succus of cancerous tissue. The tumour, though destructive to the neighbouring parts by pressure, yet did not appropriate or incorporate them in its structure. This peculiarity of non-malignant growths was strikingly manifest in the present instance; for, by pressure, producing interstitial absorption, the cancellated structure of the ethmoid and inferior spongy bones was attenuated and removed; and by the same process the vomer was detached from its position—a few shreds of it being spared and hanging loosely on the sinistral surface of the tumour. The vascularity of the growth, though remarkable on the surface, yet did not permeate its texture; hence a tendency to degenerate by assumed depravity of action was lessened. Again, the vascularity of the surface will readily account for the repeated and profuse losses of blood,—a point of great practical value, because placing the surgeon on his guard as to the importance which should be attached to those repeated losses in constituting a diagnostic feature confirmatory of malignant disease[a].

In addition to the modes of removing the jaw already specified, I shall mention a few others, practically put into execution by the distinguished names attached to them. Heyfelder performed resection of *both* jaws in the following way:—He made two cuts from the outer angles of the eyes into the corners of the mouth, then separated all the soft parts from the swelling to the inner corners of the eyes and to the nose bones. He next raised this four-cornered flap upon the forehead, carried Jeffray's chain-saw through the upper fissure of the left orbit, and divided the connexion of the left upper jaw bone and cheek bone. In like manner, he proceeded with the division of this bone from its connexion with the frontal, lachrymal, ethmoid, and nasal bones. In the same way, the right upper jaw bone was separated from its connexions, and afterwards the vomer, and the still remaining connexions were cut through with strong scissors. A lever-like pressure was made on the upper part of the tumour to complete the operation. Torsion and compression staunched the bleeding, and twenty-six sutures united the wound[b]. It is likewise stated by M. Velpeau that Mr. Rogers, of New York, removed both upper jaw bones as far back as the pterygoid processes.

[a] The original drawings by Mr. Connolly, and the part removed, are preserved in my collection.

[b] Chelius, by South, vol. ii. p. 990.

Syme's directions for performing removal of the upper jaw bone are very simple, and will not be found less convenient than any other. He says:—"Two incisions should be made through the cheek,—one extending from the inner angle of the eye, directly downwards to the lip; the other beginning over the junction of the maxillary and malar bones, and terminating at the angle of the mouth. The triangular flap thus formed is to be dissected from the tumour, and the margin of the orbit exposed"[a]. He then directs that "one blade of a large cutting pliers be introduced into the nose, and the other into the orbit, so as to divide the nasal process of the superior maxillary bone. The connexion with the malar bone is next separated in the same way, and then the palate, previous to which one of the incisor teeth must be extracted if necessary. The surgeon having now deprived the bone of all its principal attachments, wrenches it out, either with his hands or strong forceps." Professor Syme afterwards abandoned this method by the two incisions for a single curvilinear incision from the angle of the mouth to the malar bone[b].

Liston performs this operation in the following manner:—"The extent of the disease is to be accurately ascertained, and the points in which the bones require to be separated decided upon. If the os malæ be involved, and it is necessary to remove it, as well as the superior maxilla, a pair of straight tooth forceps, a full-sized bistoury, copper spatulæ, powerful scissors, artery forceps, and needles for interrupted and twisted suture, will be sufficient. If the superior maxilla only, with, perhaps, some of the smaller bones, is to be removed, then the addition to the apparatus of a small saw will be necessary, for the purpose of more readily effecting the separation of the os malæ from its anterior attachment. The proceeding is not to be dreaded on account of its extent; indeed, removal of the superior maxilla alone is the more troublesome. Supposing that the more extensive extirpation is required, incisions must be made so as to expose freely the tumour and bones where it is proposed to cut them. First of all, one of the central incisors must be extracted, either the one on the affected side or the other, according to the extent of the tumour. I have been obliged to remove a considerable portion of the jaw opposite to that principally affected, and in that case one of the molars was removed, in order to admit of the division of the bones. The point of the bistoury is entered over the external

[a] Principles of Surgery, Third Edition, p. 487.
[b] Cormack's Monthly Journal, February, 1843.

angular process of the frontal bone, is carried down through the cheek to the corner of the mouth, and is guided by the fore and middle fingers of the one or other hand, as may be, placed in the cavity. A second incision, made along and down to the zygoma, fa.. .nto the other; then the knife is pushed through the integument to the nasal process of the maxilla, the cartilage of the ala is detached from the bone, and the lip is cut through in the mesial line. The flap thus formed is quickly dissected up and held by an assistant; the attachment of the soft parts to the floor of the orbit, the inferior oblique muscle, infra-orbital nerve, &c., are cut, and the contents of the cavity supported and protected by a bent copper spatula. The division of the bones is now undertaken; with the cutting forceps, the zygomatic arch, the junction of the os malæ and frontal bone by the transverse facial suture, and the nasal process of the superior maxilla, are cut in succession; then a notch having been cut out of the alveolar process, the palatine arch is clipped through by strong scissors, placed along it, one blade in the nostril of the affected side, the other in the mouth. Then it is that an assistant will be prepared to place his fingers on the trunk of one or both carotids. The tumour is now shaken from its bed, and as it is turned down, the remaining attachments are divided by the knife; the velum palati is carefully preserved, and also, if possible, the palatine plate of the palate bone;" or, as he states, the flap may be formed in the following way with less extensive cuts:—"The incisions were commenced at the inner canthus of the eye, carried by the side of and close to the ala of the nose, along the margin of the nostril, and then through the upper lip exactly in the middle line. Another incision was made from the commencement of the first, in a curved form, along the lower margin of the orbit, and of course in the direction of the fibres of the orbicularis palpebrarum. The flap thus formed was by dissection turned outwards, and held by an assistant until the processes were cut"[a].

Mr. Fergusson's directions for making the skin flap are, "that an incision should be made from the margin of the upper lip towards the nostril, and then from the ala, as high as within half an inch of the inner canthus of the eyelids; next the cheek should be laid open from the angle of the mouth (or near it), as far as the zygomatic process of the malar bone, a.. .. necessary, an incision at right angles with this one should extend from the external angular process of the frontal

[a] Liston's Practical Surgery, p. 311, *et seq.*

bone, towards the neck of the lower jaw; now the flap between the nose and the wound in the cheek should be dissected from off the tumour, and turned upwards on the brow; then that portion of the cheek below and behind the wound should be turned downwards, and the mucous membrane divided, so as to expose freely the interior of the mouth"[a]. O'Shaughnessy, in his excellent Essay on Operations on the Jaws, has given the following interesting account of the removal of the upper jaw of a Hindu, of twenty-one years of age, which he performed in Nov., 1837:—An enormous growth completely occupied the left side of the face, rising to a level with the floor of the orbit, and extending a long way below the inferior maxilla, but unattached to it; occupying the whole of the anterior and left side of the mouth, and protruding between the lips, pressing down the lower jaw, so as almost to make the chin touch the throat, and flattening the nose, so as to leave but little trace of the prominence of that organ. Still there was no difficulty of swallowing, and the patient seemed to breathe without inconvenience through the right nares. That portion of the tumour which protruded through the mouth was of a bright red colour, and covered with mucous membrane, having at its upper part the canine and two incisors of its own side, with the central incisor of the opposite maxilla sticking out of it. The dimensions of this mass were as follows:—From the part near the ear to the most prominent part which protruded from the mouth, exactly twelve inches; and from that part which bulged below the inferior maxilla to the edge of the orbit, about ten inches. It looked, as near as may be, equal in size to the patient's head.

The principal source of pain to the patient appeared to be from distention and pressure on the surrounding parts. Notwithstanding its large size, the tumour seems to have been removed without much difficulty, the zygoma having been first cut through, and afterwards the malar bone, into the sphenomaxillary fissure, with Liston's bone-nippers. The orbital process of the superior maxillary bone and the nerve were next cut through with a strong knife, and afterwards the nasal process of the bone. The second incisive tooth on the opposite side having been drawn, the extent of the disease requiring it, the alveolar process and hard palate, as far back as the palatal process of the palate bone, were then cut through with the bone-nippers, and now all the strong attachments of the tumour being completely severed, he had no difficulty in removing

[a] Practical Surgery, p. 548.

that mass, carefully separating with the knife the palatal process of the superior maxilla from the palatal process of the palate bone, so as to preserve the soft palate from injury. The patient completely recovered[a]. M. Velpeau prefers an incision commencing at the commissure of the lips, and carried outwards and then upwards towards the temporal fossa. This incision may answer for a partial removal of the jaw, but will not expose the bone sufficiently for the section of its nasal process, for which purpose the somewhat vertical cut from the inner canthus down to the upper lip is very necessary. Dieffenbach has left the cheek alone, so as to preserve the branches of the portio dura, being content with an external incision through the upper lip, and along the back or prominent part of the nose, up towards the inner canthus, from whence he has carried the knife horizontally along the lower eyelid to the upper and outer part of the malar bone.

The practical point deducible from the opinions and experience of these eminent surgeons is, that it is by no means necessary to adhere to any particular line of incisions; a knowledge of anatomy, and the shape of the tumour, in short, the attendant circumstances of the case will modify them, and determine their course and extent.

In conclusion, there are a few points to which I wish specially to direct attention; and first, with reference to tying the carotid artery, as insisted on and put into practice by Lizars, in his operations on the jaw. Experience has proved that this proceeding is altogether unnecessary. The bleeding will be but trifling after once the flaps are formed, if the surgeon is not rash in the use of the knife; when detaching the tumour and bone from its posterior connexions, the edge of the instrument should be kept close to the osseous tissue, and then the internal maxillary artery will not be endangered. All soft attachments should, if possible, be torn down with the finger, and the very depression and gentle wrenching of the mass from its bed with the forceps, will tend to lacerate the vessels entering from behind, and still further avert bleeding. It is an important object to prevent, as much as possible, the blood flowing towards the throat in the early part of the operation, hence the advantage of the sitting posture, and of beginning with the division of the cheek bone, before the nasal process of the upper jaw bone itself is attacked, as illustrated in my case.

[a] On Diseases of the Jaws, with a brief Outline of their Surgical Anatomy, and a Description of the Operations for their Extirpation and Amputation. Calcutta, 1844.

In operations performed for the removal of either a portion or the whole of the superior maxillary bone, I do not conceive we can avail ourselves of the use of chloroform. I agree with Mr. Stanley, that there is a serious objection to its administration; for inasmuch as by its influence in annihilating sensibility, the irritability of the glottis is weakened, if not wholly lost, so there must be danger of a trickling of blood from the mouth into the glottis, without the excitement of a cough to expel it from the windpipe. The amount of this danger may be considered small, but it is sufficient to know that the apprehended evil has once occurred. Severe as the pain of these operations may be, it had better be endured than the risk of suffocation incurred, which must be regarded as a possible occurrence from the filling of the pulmonary air tubes and cells with blood. As to the division of the bone, cases will seldom occur where the chisel and mallet will be required; they cause great jarring, and, if possible, should not be used. So likewise may saws be dispensed with, for well-formed cutting pliers and powerful scissors, if the operator possesses the required strength to use them; and by the adoption of the latter, the section can be completed with such comparative rapidity that the sufferings of the patient are greatly diminished, and the shock abridged, while, at the same time be it remembered, if the instrument is steadily handled, the bone may be as evenly divided as by any other means, or, practically speaking, sufficiently so to permit healthy repair of the cut edges, a fact very remarkably exemplified in the case of the young man I operated on.

Art. III.—*Cases of Disease of the Liver, with Observations.* By Cathcart Lees, M. B., Physician to the Meath Hospital, and Examiner in Medicine to the Queen's University in Ireland.

Case I.—*Scrofulous Liver and Ascites*[a].

Patrick Walsh, aged 15, labourer, was admitted into the Meath Hospital in March, 1853; he was remarkably pallid and greatly emaciated, suffering from severe diarrhœa and distention of the abdomen, partly from fluid in the cavity of the peritoneum, and partly from a large smooth tumour occupying the right hypochondriac and epigastric regions, evidently caused by great enlargement of the liver: the veins over the

[a] Reported by Mr. Ulysses Fitzmaurice.

surface of the abdomen were somewhat dilated. The urine was natural in quantity, of the ordinary healthy appearance, with a slight cloudy sediment, acid, specific gravity 1.010, highly albuminous to heat and nitric acid. He also suffered under constant hoarseness and cough, with muco-purulent expectoration; the pulse ranged from 112 to 120. Examination with the stethoscope gave evidence of extensive tubercular disease of both lungs, but no signs of cardiac disease. He stated that he was healthy until two years since, when he was attacked with cough, which was followed by copious expectoration and night perspirations; he neglected these symptoms, and twelve months ago he was seized with profuse hemoptysis, since which time he has had frequent slight returns of it. Diarrhœa commenced two months ago; ascites set in about five weeks after, and has gradually increased up to the present. There was occasionally œdema of the ankles previous to the occurrence of ascites, but there is none at present; there is no appearance of jaundice, nor is there any tenderness or pain complained of in any part of the abdomen, or over the liver; the evacuations are very fluid, and deeply tinged with bile[a]. This poor boy was evidently suffering under extensive tubercular disease of the lungs, great enlargement of the liver, and degeneration of the kidneys, indicated not merely by the albuminous condition of the urine, but chiefly by the microscopical examination, which exhibited casts of the uriniferous tubes, but no oil-globules could be detected. He gradually sank, and died a few days after admission. There was no œdema of the extremities nor of the face during his stay in hospital.

On examination, tubercles, in various stages, with cavities, were found in both lungs; the liver was greatly enlarged, both laterally and also in depth; the peritoneal coat very smooth, with a degree of doughy consistency on pressure of the substance of the organ, combined with a certain amount of hardness and elasticity; the edges were much thickened and rounded. On making a section, it appeared smooth and homogeneous, of a glistening, semi-transparent, waxy, reddish colour, resembling a piece of raw ham; the fluid that exuded from it was a pale bloody serum, evidently very deficient in blood cor-

[a] I allude particularly to this because the late Dr. Graves, in his valuable work on Clinical Medicine, has remarked, that in persons with scrofulous disease of the liver, the appearance of the evacuations is very peculiar. "You will find one part bilious, another part clay-coloured; they will be yellow to day and pale the next, according as the liver secretes bile or suspends its functions." He infers from this that in certain forms of hepatic disease, the functions of the liver are performed, as it were, intermittingly,—it secretes bile during a certain period of the digestive process, then stops, and then secretes again.

puscles; the gall-bladder was much contracted, containing a small quantity of bright yellow bile. A considerable quantity of clear serum was in the peritoneal cavity; the spleen was small and apparently healthy. Mr. Thomas Ledwich made a careful examination of the structure of the liver under the microscope, and reported the result to be:—1st. Amorphous structureless matter in the interlobular spaces, probably albumen, rendering the interlobular plexuses obscure, and no doubt compressing them; 2nd. Numbers of highly refracting points in biliary cells, indicating the presence of fat; 3rd. Free fat cells in the expressed succus of the hepatic section. Mr. Sullivan, Chemist to the Museum of Irish Industry, made a chemical analysis, and stated the result to be as follows:—

Solid matter, ...	19·518 per cent.
Fatty matter in fresh liver, .	0·765 ,,
Fatty matter in dried liver, .	3·922, nearly 4 per cent.

The kidneys were of a natural size, but presented a varicose condition of the vessels on their surface; they were indurated, and their cortical substance was infiltrated with a glassy, albuminous substance, resembling that seen in the liver. Mr. Ledwich states the result of the microscopical examination to be:—

"Tubules, containing crystals of ammoniaco-magnesian phosphate, granular matter, fat in abortive epithelial cells, and bodies resembling pus corpuscles; Malpighian tufts; enlarged and formative vessels, increased in size with varicose disposition: the succus of the section likewise showed the presence of fatty matter."

Mr. Sullivan gives as the results of his chemical analysis of the kidneys:—

Solid matter, ...	16·580 per cent.
Fatty matter, per cent., in fresh kidney,	0·952
Do. in dried kidney,	5·742

An analysis of the urine, sp. gr. 1·008, gave the following results:—

In 1000 parts, of solid matter, 27·54

Water, ...	972·46
Albumen, ...	10·01
Urea, ...	3·20
Salts, &c.	14·33

The albumen formed 36·371 per cent. of the solid matter.

This case presents many points of interest, particularly

with regard to the condition of the liver. Its anatomical characters resembled the form described by Rokitansky, as "lardaceous (speckig baconny) liver," the morbid appearances of which "are owing to infiltration of the hepatic parenchyma, by a coarse gray, sometimes transparent, albuminous, lardaceous, or lardaceo-gelatinous substance;" and this description is followed by Dr. Budd, who, in his work on "Diseases of the Liver," adopts the term "scrofulous" (originally employed by the late Dr. Graves), and says—"The foreign matter, to which the liver owes its large size, is *albuminous*." Now, I consider that both he and Rokitansky are wrong in denominating this deposit 'albumen;' for as (in the present state of science) we only recognise albumen under two forms, either fluid, like white of egg, or coagulated, and as this deposit in the scrofulous liver resembles neither of these forms,—it either cannot be albumen, or it must be some modification of it, perhaps that principle termed by Müller and Mialhe, 'albuminose,' a substance analogous to albumen, but of a peculiar kind, not coagulating by heat, but coagulating by the mineral acids[a], and which, according to M. Claude Bernard, who has recently distinguished himself so much by his researches on the physiology and pathology of the liver, is formed by the fibrine of the food being dissolved by the gastric juice, thus changing it into this 'albuminose,' which he believes to be always found in the portal system, causing the blood to coagulate badly, owing to the deficiency of fibrine. Now if the liver performs its functions properly, the blood leaving it by the hepatic veins ought to contain plenty of fibrine, so that we must suppose this albuminose is transferred into fibrinous material, and thus healthy blood is formed. But if this change do not take place, it will result, that the albumen, being in excess in the blood, will pass off by the urine (as occurred in this case); and then the blood, being deprived of its fibrine, cannot circulate as usual in the capillary vessels, but transudes through their walls, causing œdema of the areolar tissue, and effusion of serum into the cavities of the abdomen and chest. This may also account for the insidious nature of the disease, as, owing to the gradual manner in which this deposit takes place, there is no pain nor tenderness experienced in the region of the liver, as there is no inflammation of the substance or of its capsule, even though it be stretched, as occurs also in fatty degeneration of this organ, when the hepatic cells become distended with oil, and when the liver

[a] This was the case with this deposit, according to Mr. Sullivan.

becomes greatly enlarged, in this respect resembling the scrofulous liver, but differing from it in not being accompanied by ascites. Dr. Budd accounts for this difference by the "albuminous deposit in the scrofulous liver being firmer and less yielding than the oil-globules in the fatty liver;" but Mr. Thomas Ledwich has suggested an additional explanation, founded on the microscopical examination of the part, showing that in the scrofulous liver the deposit takes place in the lobules, and not in the cells, and is thus much more likely to compress the vessels, interfere with the circulation in the liver, and thus cause ascites, than fat or oil, which is usually found in the hepatic cells in that condition termed fatty liver. In most cases of scrofulous liver we also find (as in the present) the urine albuminous, the cortical structure of the kidneys infiltrated with a deposit similar to what is in the liver, though generally of more recent date, as dropsy of the face or extremities seldom occurs until an advanced period of the case, when disease of the kidney is induced by the blood becoming charged with impurities, which, being no longer capable of retention in the liver, or cast off through it, are thrown upon the kidneys; these organs endeavour to eliminate them along with the ordinary principles of the urine, and disease of their secreting tubes is the result. In this case the pallid hue of the patient was very remarkable, as also the peculiar watery appearance of the blood in the liver, and tends to confirm Dr. Budd's observation, that in these cases "there is generally a state of anæmia, partly owing to the drain of albumen from this condition of the kidney, but also caused by the disease of the liver itself lessening the amount of those changes which the blood naturally undergoes in its passage through the liver, and which, doubtless, contribute in some way or other to the reproduction of its coloured corpuscles."

Case II.—*Medullary Cancer of the Liver undergoing the Suppurative Process.*

Thomas Code, aged 42, of temperate habits, a blacksmith, was admitted into the Meath Hospital, under my care, for a tumour in the abdomen. He stated that he had always enjoyed good health until about twelve weeks ago, when he began to lose his appetite, and had frequent sensation of nausea, but no vomiting; he had profuse perspirations occurring every evening, which have continued to the present time. Six weeks ago he had a fit of shivering, followed by perspiration, which has recurred every evening since, and he then felt a small

swelling in the right hypochondriac region, just below the false ribs, and very tender on pressure; this has been gradually increasing, and there is now an ill-defined, uncircumscribed tumour, about the size of a large orange, extending from the epigastrium for about four inches towards the right hypochondric region; it pulsates strongly when he lies on his left side or on his back, and moves up and down with each act of respiration; he says it feels as if it were alive, and there is slight œdema of the integuments over that part. He is greatly emaciated, of a very pallid, unhealthy cast of countenance; can lie on either side; has no cough nor pain in the shoulder; bowels costive, tongue coated with a moist creamy fur, the papillæ very prominent at its base; urine very high colour, with a copious, pink, lateritious sediment, clearing by heat. He was constantly drenched in perspiration of a nauseating smell; there was not any jaundice, but his skin was very pale, and of a dirty waxy appearance; pulse ranged from 80 to 90, soft and rather feeble; he complains of feeling much pain in the tumour after being handled; another tumour appeared in a few days close to the first, and fluid could now be detected in the peritoneum; he got severe diarrhœa, and passed very dark, fetid evacuations; he became very feeble, pulse quickened, hiccup set in, and he sank quietly, having vomited for the first time only on the day preceding his death. Examination of the body showed the liver to be greatly enlarged, occupying the right hypochondric and epigastric regions; a soft fluctuating tumour, the size of half an orange, occupied the centre of the gastro-hepatic omentum, and joined the anterior edge of the liver; an incision into this tumour gave issue to a large quantity of purulent matter, of a pale green colour, mixed with thick flocculent shreds of lymph; this extended deep into the substance of the liver, and was bounded by broken up fungoid detritus; the anterior surface of the liver over this diseased structure was natural in appearance; there were, however, three small but well-characterized encephaloid tumours on the upper surface of the right lobe. The stomach was attacked externally by the contiguity of the cancerous mass, but the interior was healthy; no other organs were diseased. There was no attempt at adhesion between the surface of the tumour and the parietal peritoneum, nor any evidence of peritonitis.

This case, which I consider to be one of medullary cancer of the liver in a stage of suppuration, is worth recording,—first, from its great rarity, as I am not aware of any similar one; and secondly, from the difficulty of diagnosis it presented. We know that scirrhous tumours may be gradually transformed into

a soft, brain-like, pulpy mass, or that encephaloid disease may assume the cerebriform character from the commencement; but though Dr. Carswell, in his Pathological Anatomy, enumerates, all the changes which take place in both species of carcinomas viz., congestion, hemorrhage, softening, and sloughing, he does not allude even to the possible occurrence of suppuration; and Rokitansky merely alludes to it in these terms: "Medullary cancer rarely passes into suppuration, as it generally terminates fatally by inducing universal cachexia and exhaustion."

The diagnosis of this case presented some difficulty at the first, as, from the frequent occurrence of rigors, the profuse, sour perspirations in which he was always drenched, the soft, quick pulse, but above all, the tumour in the region of the liver, with an œdematous state of the integuments over it, made me at first suspect that I had to deal with an abscess of the liver, and it was not until after the appearance of the second tumour, the occurrence of ascites, and a careful examination made by Sir Philip Crampton and Dr. Stokes, that it was decided to be a case of malignant disease. With reference to the occurrence of perspirations in cancer as a sign of the softening process having commenced, I think it is a point worthy of careful investigation, as I am not aware of its having been particularly alluded to by systematic writers. Dr. Budd, in his work, states in general terms that "in advanced stages of the disease, i. e. cancer of the liver, there is often, as in cancer of other parts, profuse sweating;" but he does not appear to connect it with the process of softening which I suspect to be the case, as in many instances of extensive and advanced cancerous disease of the liver which have passed under my notice, both in the Meath Hospital and in the South Union Workhouse, I have made particular inquiry as to this symptom, and I do not think it is present until the disease has proceeded to softening.

The mobility of the tumour accompanying each act of respiration was very evident in this case, and afforded a sure indication that no adhesion had formed between it and the parietal surface of the peritoneum, a point of great importance to ascertain, as at first, when the tumour was supposed to be an abscess, and the propriety of opening it was discussed, the idea of operating was negatived from the presence of this sign, as indicative of the want of adhesions between the liver and the abdominal parietes, and the consequent probability that any attempt to open the abscess would have been attended with fatal results from the effusion of the contents into the cavity of the peritoneum, so that it involves a very important point

in practice, though often a difficult one to decide positively, whether adhesion has taken place between an abscess of the liver and the abdominal parietes or not. Dr. Budd says[a]: "This may sometimes be done, when the liver is large, and the abdominal parietes are thin, by feeling the edge of the liver, or some prominent part of its surface, and marking the place of this with a pen on the surface of the belly. If the liver be adherent to the abdominal parietes, the line or spot so marked will correspond to the edge or prominence of the liver in all positions of the body; if it be not adherent, when the patient draws a deep breath, or changes his posture, the liver will slide along the wall of the belly, and the line or spot will no longer correspond to the edge or prominence in question; but when there is a circumscribed œdema, or a slight blush on the skin, over the abscess, we may be sure, not only that the liver is adherent, but also that the abscess is making its way to the surface"[b].

The complete absence of jaundice in both of these cases is worthy of remark, but may be accounted for, first, by there being no mechanical obstruction to the free discharge of bile from the liver into the intestines; and secondly, from there not being any general disorganization of the secreting portions of the liver; for although the interstitial deposit was very general in the case of scrofulous liver, yet as it took place in the lobules, and not within the secreting cells, it did not interfere with their functions. The absence of this symptom may also tend to support the opinion of those physiologists who maintain that the colouring principle of the bile is chiefly formed in the liver itself, as a result of the changes which there take place in the blood.

Art. IV.—*On the Cure of Urinary Fistulæ by Compression.*

By John Hamilton, Surgeon to the Richmond Hospital, Examiner in Surgery to the Queen's University in Ireland.

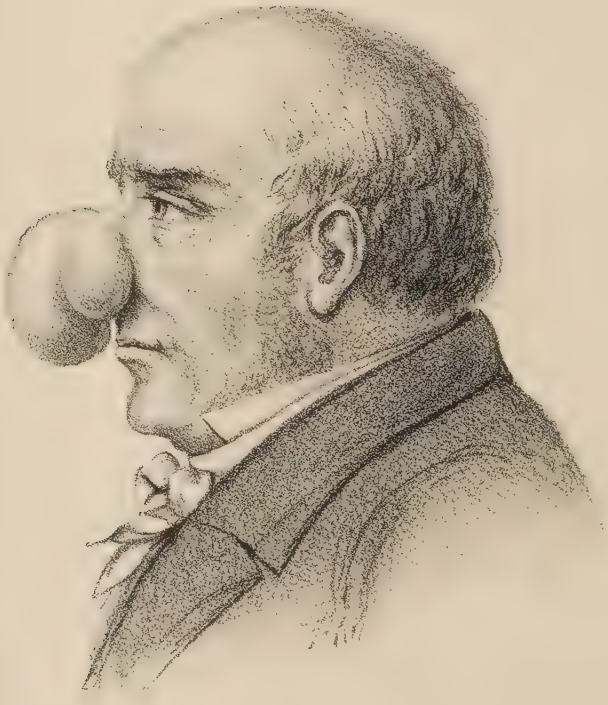
Some years ago I had an opportunity of examining the parts in a young man who had urinary fistula for several years, and who died of typhus fever. There was a fistulous opening near

[a] Second Edition, p. 115.

[b] Dr. H. Kennedy, in a paper published in this Journal, in November, 1851, has mentioned a case of malignant disease of the stomach, "in which the tumour caused by it moved an inch and a half at every inspiration, and this sign established the diagnosis as to whether the tumour was an aneurism or not, for it had a very strong pulsation."

the anus, that I traced up to the urethra, which it did not enter, being separated from it by a thin membrane, near the caput gallinaginis. On the other hand, I found a round opening near the same part of the urethra, that is, by the side of the caput gallinaginis, which admitted a probe for an inch and a half, the obstruction to its further progress being a membranous septum that divided it from the other fistulous tract, with which I have little doubt it once communicated. The linear eminence of the caput was prolonged over the urethral opening, projecting quite above it, so as to form a valve preventing the entrance of urine from behind. The main fistula was not a mere passage, but opened out into an enlarged space, from which several short blind passages ran. A striking peculiarity of all the fistulæ was the extreme obliquity of their course, not running from the perineum direct to the urethra, but nearly horizontally between the urethra and the perineum, till they came to the openings in either. It accounted for the impossibility in most cases of urinary fistulæ of getting a probe beyond a very short distance; and it occurred to my mind at once how easy it would be to obliterate them by compression properly applied to the perineum. I have since met with other instances confirming this peculiar pathology, of which it will be sufficient to give the two following:—

A man of the name of Bolton had been under my care in the hospital with very bad stricture and perineal fistulæ, through which urine came whenever he passed water. He left the Hospital before anything effectual could be accomplished in the way of dilating the urethra. After many months he returned in a sinking state, fell into urinary coma, and died a few hours after. The kidneys, ureters, and bladder, were extensively diseased, but I shall confine my description to the urethra. The opening of the urethra from the bladder was larger than natural. On slitting it up, a contraction was found at the bulbous part, nearly amounting to complete obstruction. About an inch and a half around the stricture the tissues were consolidated and whitish, cutting like cartilage, and from the lower part of the stricture, for some distance anterior to it, and from the dilated portion behind it, a mass of induration extended down to the perineum. Fistulous tracts could be traced through this from the perineum up to the urethra. They went very obliquely into an oblong cavity of narrow dimensions which ran beneath the urethra, parallel to it, and along its lower surface. I had no doubt that some irregular depressions observable on the surface of the dilated urethra



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behind the stricture had originally been orifices communicating with the fistulous cavity and perineal outlets; a delicate transparent membranous band lay across the floor of this dilated portion of the urethra, and was, I believe, the remains of the valve with which nature attempts to close the inner orifice of urinary fistulæ.

A man aged 50 was admitted into the Richmond Hospital, October 28th, 1846, with aggravated symptoms of stricture, the result of a fall on the perineum many years before. There was a hard tumour in the perineum, which I opened, and which, after discharging pus and urine for a few days, finally closed. No instrument, not even the smallest catgut, could be got into the bladder. From the complaint he made of pain in the loins, lassitude, occasional vomiting, and the appearance of a cloud of pus in the urine, which remained acid forty-eight hours after having been passed, I diagnosed the existence of serious disease of the kidneys, and considered the operations of perforation or division of the stricture inadmissible. He soon after gradually sank, wasted by diarrhœa, in addition to his other complaints.

The liver was found very much enlarged, and paler than natural; both kidneys remarkably diseased, full of round pustules varying in size from a millet-seed to a large pea; the cortical substance redder than natural; the left kidney of its usual size; the right kidney double its ordinary calibre.

The urethra healthy till a little anterior to the bulb, where there was a contraction so close as nearly entirely to close the passage. At the seat of stricture the surrounding parts were white, fibrous, and indurated. Behind this obstruction the urethra was dilated; the natural smoothness of the membrane gone; the surface irregular, and here and there superficially ulcerated. At the posterior part of the dilatation was a circular opening, which readily admitted a probe, and which had, no doubt, communicated with the urinary abscess. This opening was almost entirely covered by a membranous projection, from behind forwards, that must have acted like a valve, closing the aperture when pressed upon by the urine coming from the bladder[a].

Another stricture existed behind the first, stretching across the membranous portion of the urethra like a band. From this to the bladder there was great dilatation, particularly of the internal orifice. The prostate was somewhat enlarged and projecting.

[a] See Plate IV.

The consideration of these pathological conditions, viz. the extreme obliquity of the fistulæ, and the almost valvular membrane over the internal orifice, confirmed me in the idea that compression would be very useful in the treatment of some cases of urinary fistulæ. For, properly applied over the perineum, it ought, by bringing the sides of the fistulæ together, to obliterate them; as we so often find it do in mammary fistulæ, and those remaining in the groin after the suppuration of the lymphatic glands in cases of constitutional bubo; and also, by pressing upwards the lower side of the urethra against a catheter retained in the bladder, it would tend to shut the internal valvular orifice, and, by thus preventing the entrance of urine, materially assist the first object. A few examples will show that these anticipations have been realized.

A Calculus in the Urethra, with Perineal Fistula; Removal of the Calculus, and Cure of the Fistula by Compression.

April 16, 1849. Lennan, aged 40, a tiler, has a fistula in perineo discharging urine, and such obstruction in the urethra that, with much forcing, the water only comes in drops; the smallest instrument cannot be got beyond an impediment just anterior to the bulb. The perineum appeared a little fuller than it ought to be; and towards the left side, near the anus, it is red and swollen, with a small red papilla in its centre, from which a clear drop of urine oozes. On examining the perineum there can be felt, in the situation of the bulb, an oval tumour of stony hardness; it ends anteriorly in a narrow extremity, and there is some induration of the urethra before it. The tumour extends behind the anterior end of the anus; it is not fixed or imbedded, but when grasped between the finger and thumb can be moved from side to side. From the excessive hardness and this lateral mobility, I regarded it as a stone lodged in the urethra. The history was in favour of this. A year and a half ago he suffered from severe pain in the left loin, which suddenly left him, and he then felt uneasiness in the urethra, and obstruction to the passage of water; he could distinguish in the perineum a small hard body, moveable under the skin; this became gradually larger, and the obstruction proportionably increased until an abscess formed in the perineum, which burst and left the present fistula.

A few days after admission he got complete retention of urine; the resident pupil, Mr. O'Gorman, tried in vain to get through the contracted portion of the urethra anterior to the

calculus. When I arrived I found him suffering very much; the bladder immensely distended, reaching to the umbilicus, and a constant dribbling away from the urethra; he was calling loudly for any operation to give him relief. I passed a staff down to the obstruction, gave it to an assistant to hold, and then, fixing the tumour with my fingers, I made an incision from the scrotum to the anus, through the strictured portion of the urethra, and down to a stone, against which the knife grated; the free incision allowed a ready escape of the calculus, which was for such a situation of large size. While dislodging it the urine gushed out with great force, and after the stone was extracted it all came away through the wound, with instant relief; the bladder was paralyzed to a certain extent by the over-distention, and it was necessary to press it to expel the whole of the urine after the first gush had taken place. The stone was of a pale yellow colour, with a smooth surface, dusted with small, bright, shining crystals, the shape irregularly pyriform, nearly tapering to a point anteriorly, and bulbous behind, moulded in fact to the distended bulbous portion of the urethra. The section, as seen in the drawing, shows the nucleus not in the centre, the deposit of increase, after its lodgment in the urethra, being all from behind. Examined by Dr. Frazer, it was found to be a fusible calculus. For some time the water came nearly entirely by the cut in the perineum. A fortnight after, I introduced a gum-elastic catheter into the bladder, which I found best accomplished by passing the end from the urethra out at the wound, and then from the wound into the bladder; I secured it in, and kept it so for two days. This plan of leaving the catheter in for a few days at a time, sometimes four days together, soon brought the passage of water to the natural channel, but not entirely, as, when I left home for England, on May 26, some came by the fistula, the opening of which was very small. Though requested to come to me on my return from England, I did not see him until June 27, 1850, a year after. He then came to the hospital, the fistula open, and a good deal of the water passing by it. It looked like a raised white papilla, in the centre of which a very small opening existed. I passed in a No. 7 gum-elastic catheter and secured it; and, wishing to try the effect of compression, I applied a compress over the fistula, with a tight bandage.

June 28. Since the instrument has been in, and the com-

press applied, he has felt no urine to come by the fistula. When I removed the compress, I found the fistula quite dry and closed. I took out the catheter, and told him not to make water for some hours; when he did so, *none came by the fistula.*

July 1st. No return of water by the fistula, which is, therefore, completely closed. The water came in a very good stream by the urethra. He left hospital contrary to my wish, as I did not think the strictured part of the urethra was sufficiently dilated to secure the permanence of his cure. Accordingly, he was re-admitted two months after, August 28, 1850, with symptoms of abscess at the neck of the bladder, pain, frequency in urinating, pus in the urine, which remained acid after having been kept several days, fulness, tenderness, and irregular soft and hard feel of the prostate; the fistula had re-opened, and much of the water came by it. The urethra was hard and contracted near the strictured portion, which would not admit a No. 5 silver catheter; I succeeded, however, in gradually dilating the stricture, and in curing the irritation of the bladder, but the fistula still remained open. I therefore introduced a gum-elastic catheter, secured it in, applied pressure to the fistula in the usual manner, and in *twelve hours* it was quite closed and dry.

He continued well for nearly two years, but in consequence of the same neglect in coming to have instruments passed, and the stricture consequently closing, the fistula broke out again. I had much trouble in dilating the stricture, and when I got as far as a No. 8 gum-elastic catheter, the fistula remained still open. On Thursday, August 5, 1852, I kept the instrument in, and applied compresses of lint graduated, so as to make firm pressure at the seat of the fistula. On the next day I removed the compresses, and found the lint dry,—the fistula closed by a thin film of skin. I kept him in for three months after the fistula was closed, in order to dilate the passage. This was fully accomplished, as I got in a No. 11 silver catheter, and I then taught him to pass a catheter for himself. It is now ten months since he left the hospital, and the fistula has remained closed.

The relapses of the fistula in this case have, of course, nothing to say to the method of cure: accomplished by any of the ordinary means, the carelessness of the patient to attend to the proper after-treatment of complete dilatation of the strictured part of the urethra would have the same result. A man once the subject of urinary abscess and fistula will, on the stricture contracting again, and the parts behind getting

irritated and inflamed, be liable to a return of the disease; but on three occasions, in a period of four years, compression stopped the urinary fistula, it may be said, at once. On two of these the pad was removed after twenty-four hours, and the fistula found closed; in the third, compression for twelve hours only was sufficient for the cure. It is rare indeed that such a result is accomplished in so short a time and with such safety to the patient by any other means,—keeping the instrument in the bladder will certainly not generally do it; besides, in this case it had been already tried unsuccessfully for two, three, and four days at a time.

Urinary Fistulæ, Abdominal and Perineal, cured by Compression.

John Campbell, aged 29, admitted into hospital in July, 1849. Has three urinary fistulæ, one in the perineum near the scrotum, a second on the abdomen at the root of the penis, and the third and principal one at the lower part of the abdomen, three fingers' breadth from the root of the penis, marked by a protuberant papilla in the centre of a cicatrix. Pus and urine can be pressed from this. From the two first the urine dribbles out on micturition, and it comes from the last in a double stream, with a strong jet, at least a foot from the belly. It is difficult to say whether more urine passes this way than by the penis. The belly is all scarred with the cicatrices of former incisions, made to relieve the infiltration of urine, and to give exit to sloughs. These scars are of a dull red colour, and some, not quite healed, are covered by scabs. They are chiefly confined to the right side of the abdomen. The integuments of the pubis and right hypogastrium are pale red, glossy, and swollen, and the fold of the right groin is made a deep sulcus. There is some tenderness on pressure.

He had gonorrhœa nine years before, and two years after, symptoms of stricture began. Three years ago, whilst travelling in the canal-boat, he drank an immense quantity of ginger beer (seventeen half-pint bottles!) The next day he had great pain at the bottom of the belly, and was unable to make water. A surgeon passed an instrument and relieved him. This operation had to be performed twice subsequently. The water only flowed in a small stream, and deposited a mucous sediment. Six months since, after shivering, profuse sweats, and the most intense pain over the pubis, which became red and swollen, he suddenly got extravasation of urine, and was obliged to go into the Tullamore Infirmary. By the judicious treatment he there underwent,—extensive incisions, &c., his life

was no doubt saved. He remained there until a few weeks ago, pretty much in his present state. While in the infirmary he says that an instrument had been kept for several days in the bladder. I succeeded, a week after his admission, in getting a No. 8 gum-elastic catheter into the bladder; the same day I opened an abscess in the scrotum.

The next day, July 28, I re-introduced the gum elastic catheter, left it in, and applied compresses over the three fistulæ.

30th. No urinary discharge from the fistulous openings at the base of the penis and perineum; but a dribbling still from the one above the pubis.

31st. Slept well last night. The instrument was changed for a larger one. When the compresses were removed a small quantity of pus and urine escaped from the upper fistula. The compresses and bandage were re-applied.

August 2nd. The urine has ceased to come from the fistula above the pubis. The instrument was taken out and the compresses removed, and he was let out on pass for some pressing business.

Two days after, a little urine appeared at the supra-pubic fistula. I therefore introduced the catheter, and applied the compression as before. I did not remove it for a few days, after which no more water appeared. My clinical clerk, Mr. Stewart, observes in his report of the 14th:—"I witnessed him making water; not a drop came from any of the fistulæ. The urine came in a full stream, and appeared natural."

I kept him in hospital until the 6th of September to insure the proper dilatation of the passage; he was then discharged perfectly well.

From the number and extent of the fistulæ, this case required more time, and yet in what other way would it have required so little to effect so complete a cure. It appears to me a striking instance of the value of compression. The most essential point of pressure I believe to have been that over the perineum; by its pressing on and closing the internal orifice, the urine was prevented entering it, and the supply, as it were, on which depended the existence of the abdominal branches of the main fistula was thus cut off.

T. Mooney, aged 40, a painter,—pale and sallow, a hard drinker,—was admitted into the Richmond Hospital, September 24, 1850, with retention of urine and a large urinary abscess. No instrument could be got into the bladder there was so close a stricture, but an opiate and the warm bath relieved

the retention. The abscess burst into the urethra, pressure on it causing a discharge of pus and urine from the urethra; and when he made water he observed the swelling in the perineum to become larger. He had frequent rigors and vomiting, and was generally extremely ill. For a short time he rallied, and got much better, he then became worse, with a return of the rigors and vomiting, and great obstruction in passing water, once amounting to complete retention, which was suddenly relieved in the warm bath by a gush of pus coming from the urethra. These symptoms arose from the abscess working its way to the perineum, which, as well as the scrotum, had gradually become more swollen. I therefore made a free opening, and let out a quantity of pus and urine. This gave great relief, the urine flowing freely through the wound.

Oct. 23rd. I passed a No. 4 gum-elastic catheter, which I fastened in.

25th. The instrument still in; the greater part of the urine comes by the cut. I withdrew the catheter, and replaced it by one of No. 7; he had a rigor the next day, and I removed the instrument.

Nov. 3rd. I passed a No. 6 gum-elastic catheter, and left it in; at the end of the second day there seemed to be no disposition in the fistula to close; I therefore tried compression by means of a compress and bandage. The following day I found that it had answered admirably well, scarcely three or four drops having come by the fistula, and I re-applied the compress. The next day the fistula had completely closed. He remained in three weeks after to have the passage dilated, and then left sooner than I wished, but in every respect apparently well, and getting flesh.

The stricture here was a very bad one, extremely close, with a good deal of surrounding callosity of twenty years' standing; and three times he had urinary abscess. Little progress was made in closing the fistula by keeping an instrument in the bladder. The good effects of the pressure were most remarkable, and the speedy cure following its application needs no comment.

The fistula remained well for a year and five months, when he again presented himself at the hospital for admission. In the interval he had totally neglected the use of instruments, and had continued his usual drunken habits.

When admitted, April 21, 1852, his state was as follows:— There was a large urinary abscess extending from near the external abdominal ring down the right side of the scrotum to

the perineum. The whole of the scrotum was much swollen, tense, shining, and œdematous; the perineum was prominent, the central *raphé* forming a large ridge; the entire swelling hard and consolidated, except at the side of the scrotum, where it was soft, as if from the coming forward of matter.

I opened the abscess in the perineum very freely, finding it to be a regular cavity with hard walls. I also opened the abscess where it extended up by the side of scrotum. There was urine mixed with the pus in both.

He got much better, the openings gradually contracted, the scrotum became soft and nearly of its natural size; but the greater portion of the urine came through the fistula in the perineum and that at the side of the scrotum; only a small portion through the urethra.

I failed in several attempts to introduce an instrument into the bladder, being stopped by a hard cartilaginous mass about the bulbous portion. The patient himself, an ingenious, handy fellow, succeeded better by the following manœuvre:—He passed the gum-elastic catheter, without the stilette, till it rested against the stricture, he then put in the stilette, and, turning the point of the instrument in different directions, found that the passage inclined to the right, and passed it on into the bladder. By following this plan I afterwards introduced instruments readily, getting gradually up to No. 8; and at one time left it in for twenty-four hours. But though he improved greatly in his health, the pallid hue of his face being changed for a healthy colour, yet the fistula showed little signs of closing.

Aug. 5th. I introduced a No. 8 gum-elastic catheter, and applied a strong graduated compress, with a bandage, over the perineal fistula; the catheter was fastened by threads to two pins in the bandage on each side.

Previous to this his state was as follows:—A fistula in the perineum, and another anteriorly at the upper part of the right side of the scrotum near the root of the penis; a hard mass extending from the fistulæ to the penis; this hard mass was most probably the consolidated structure through which the fistulæ ran. The opening of the scrotal fistula is puckered, and projected over by a hard, white papilla. That in the perineum is difficult to make out; a firm, irregular, white projection, half the size of a marble, hanging over it. The urine comes chiefly by the two fistulous orifices; very little by the natural passage,—sometimes none at all. From the scrotal fistula it flows in a full stream; from the perineal freely, though drop by drop. In drawing off the water through the catheter previously to

applying the compress, some flowed at the same time from the perineal fistula. I applied a compress over it, very graduated, beginning with a very small piece of lint.

6th. I removed the compress, and took out the catheter. The compress was *not* wet with urine, and the opening of the perineal fistula seemed closed. A little, but very little, water had come by the scrotal fistula.

7th. The fistulæ were not closed, as he said that a small quantity of urine had come by the perineum, and a stream the size of a thread from the scrotal one.

9th. On carefully examining the perineal fistula immediately after he had made water, I could perceive no sign of any having come through it; but as he said he had himself perceived some on a previous occasion, I re-applied the compress and bandage.

10th. He bore the pressure well: I did not disturb it.

12th. I yesterday removed the compress and catheter; the fistulæ were perfectly closed and dry, and have continued so, and he can pass water very well. He was kept in the hospital until the 17th; both fistulæ well, in excellent health, and able to pass an instrument for himself.

It will be observed that though there were two fistulæ, a compress was only applied to the perineal one. I intended when this was closed to treat the other; this became unnecessary, the one compress, by pressing the parts around the catheter, prevented the entrance of urine, and effected the obliteration of both. This is important, as it is difficult to apply effectual compression to a fistula at the side of the scrotum.

These cases of themselves speak so plainly in favour of the treatment of urinary fistula by compression as to render it unnecessary for me to insist more in detail on its advantages. I feel convinced it will take a high place among the methods already used in treating this complaint, and though of course liable to occasional failure, the cases in which it will not succeed will be largely the exceptions. There is at least this great merit, that its application is unattended with any risk; and if the opening of the fistula be not completely closed, the state of the patient will be materially improved, and he will be after as fit or fitter for the trial of any of the other means of treatment that have at different times been proposed. The only other case in which I have tried compression without success proves this. A boy of the name of Doherty, aged 17, was admitted into the Richmond Hospital in September last. About two years before, he had fallen astride on a beam of

timber, and had ruptured the urethra. The retention of urine could only be relieved by an incision through the perineum down to the lacerated urethra. In spite of very judicious treatment, and the keeping of an instrument in the bladder for a long time, the wound never healed, but ended in a perineal fistula, through which the urine flowed freely. He went to the country, and at the end of two months the urethra had so contracted that for a long while no instrument could be got through the strictured part; and during many months a small silver catheter was once only passed into the bladder. He then remained in an hospital for eight months, when an incision was made through the fistula, and an instrument passed into the bladder and retained, but it had soon to be removed, from its exciting severe constitutional disturbance; and he left the hospital as bad as when he entered it.

When I first saw him, his state was wretched in the extreme. He could, with much straining, only pass water drop by drop, the greater part coming very freely from a fistula. This fistula was situated anterior to the anus, a small raised papilla admitting the point of a probe. It kept constantly oozing a clear, pale urine, wetting the sheets and bed, excoriating the perineum and anus, and keeping him in a sop of urine, rendering it necessary to put a double blanket and piece of oil-cloth under him. He was broken down in health and very irritable, unable to bear the perineum to be touched, or an instrument to be passed.

When I attempted the last, I found the smallest instrument arrested a little anterior to the place of the fistula, where a hardness of some extent could be felt. On pressing firmly with the point of the instrument it slipped out at the fistula.

Sixteen days after admission I got in a No. 3 metallic catheter, and by degrees increased the size to No. 10; but this not without difficulty, and the irritability of the urethra was such that it was not until two months after admission that he became in a condition to bear a gum-elastic catheter to remain in, and the compression to be applied.

Though I tried compression six or seven times, it did not accomplish the closing of the fistula, but a great improvement was effected.

Dec. 16th. After the third trial the report is—"He passes water in a good stream, and only a drop or two comes by the fistulous opening; an immense improvement has therefore been effected by the compression."

Beyond this I never could get, which I attribute to the internal opening being, probably, large from the nature of

the cause—a ruptured urethra; and secondly, from the fistula being nearly direct, as proved by the ready escape of the end of the instrument out through it when I first explored the urethra.

A few words as to the mode of applying the compression. If the fistula is deep at the bottom of a sulcus, as sometimes happens, it is best to put a very small compress of fuzzy lint over the opening, so as to fill up the hollow, and then graduated compresses over this; if the surface of the fistula is plain, a moderate-sized flat compress, with one or two larger ones over it, will do; a double-headed spica bandage of strong calico keeps these in their places, and exercises a firm, steady, equable compression. The bandage should be pinned to the compress, and plenty of pins should be used at the crossings of the bandage to prevent its slipping. The gum-elastic catheter, which has been previously introduced, may be best secured in by a piece of thread tied round the top, and the ends twisted round two pins, one in each groin, where the bandages cross. A little plug of wood in the catheter can be removed when the patient feels a desire to pass water,—it should not be done too often. If the patient says he thinks some water has come through the fistula, the bandage and compress can be removed, and if found to be the case, a larger-sized catheter can be passed, and fresh compresses and bandage applied with tighter pressure. But if there is no feeling of the water having come, the apparatus may be left on for forty-eight hours; and, as the cases here given prove, at the end of that time the cure of the fistula may be complete.

Art. V.—*Selections from the Unpublished Manuscripts of the late* Abraham Colles, *Professor of Surgery to the Royal College of Surgeons of Ireland.* Edited by his Son, William Colles, F. R. C. S. I., Surgeon to Steevens' Hospital, &c.

(*Continued from vol. XV.* p. 289.)

No. 2.—Injuries of the Head.

Case I.—A man, aged 35, on Tuesday, August 22, 1815, received a kick from a horse on the left side of his skull. When brought into hospital his pulse was 60; he was bled twice that night: next morning the pulse was 120, without intermission. He lay quite insensible; breathing stertorous, slow; cheeks and lips puffed out at each expiration. He was constantly moving the arms as if to push them down. This motion seemed to be some-

what convulsive; pupils large, but not dilated; was sensible of pain when the wounded part was pressed on. The wound was through the anterior part of the temporal muscle, and exposed an undepressed fracture. The succeeding evening blood was seen to rise up through the fracture. On dividing the muscle, there appeared a depression at the inferior angle of the parietal bone; here a large crown of a trepan was applied. On the pieces being removed, a coagulum of blood pushed through the opening. Endeavouring to remove it, I found that taking away one portion only exposed another, so that I feared it was a mixture of blood and brain. A probe passed so deep as to cause alarm from its meeting no resistance. I now passed the probe curved along the inner surface of the cranium, and found the bones stripped of the dura mater, and then passed in my forefinger along the denuded bone towards the orbit. When up to the middle joint, I then felt the dura mater adhering to the bone. I now had courage, and turned out the coagulum, and then the dura mater was seen more extensively detached than I conceived it possible, the cavity being of a conical shape. During the day the man spoke once or twice; the countenance was natural, the breathing easy. On Thursday he was still better; he drank, answered questions, and all those strange motions of the arms ceased. Friday, still improving. Towards the afternoon he had one or two rigors; he frequently put his hand to the head, and drank largely. Early on Saturday he died.

Post-mortem.—Dura mater still at a considerable distance below the cranium, yet not so much as on the day of the operation. The surface of the dura mater was rough and thickened; the pia mater of a dirty colour, easily separated from the brain.

Remarks.—This case affords an instance of the propriety of early trepanning in cases of simple fracture of the skull, and convinces me of a fact I before doubted, that an effusion of blood on the dura mater might be to such an extent as to require the operation of the trepan. How was this membrane detached? How are we to account for the dura mater remaining depressed until the interval between it and the brain came to be filled up by blood?

Case II.—March 17, 1819. A man was brought into hospital insensible. He was a stucco-plasterer. When at work in the morning he walked into a house near his employment, and asked was not he a stout man to walk with his coat on his arm. On being laughed at, he said, he fell off the scaffolding and hurt his head. Before he could say more, he became in-

sensible, and was brought to hospital. He was bled immediately after admission; but his extremities being cold, and his countenance pale, the bleeding was stopped. His breathing was slow and stertorous; pulse 46, not regular; pupils widely dilated and quite immovable; a depression, the size of a crown, was seen on the lower and anterior part of right parietal bone, and could be felt through the integuments. The severity of the symptoms, and the depressed state of the fracture, seemed to justify immediate operation. The integuments adhered to the bone. I saw two fractures at nearly right angles; no blood oozed up through these fractures; the bone was here very thin. On removing the piece, the blood pushed up into the opening, as if it was squeezed out forcibly, and on trying to turn out this, I found some florid fluid blood. The finger sunk to a frightful depth, I withdrew it, and carefully examined the discharged clots for any portion of brain, but not finding any, I again introduced the finger till it met the dura mater, which was not until it was up to the middle joint. Measured by a rule, it was much above an inch. I found the separation reached from a little above the trepan-hole down to the projection of the petrous bone and back to the longitudinal sinus. On turning out the coagulum, I saw the wound in the artery of the dura mater, which I could not reach without removing a further portion of bone. I held up the artery, and passed a curved needle under, between the artery and dura mater. Still coagula formed in the deep part of the wound; and I was obliged to introduce dossils of lint, with ligatures attached, filling up with pieces of sponge. The dura mater showed no disposition to rise up, nor did the breathing or pulse improve. He died in two or three days after.

CASE III.—October 21, 18—. At 1 o'clock on Sunday morning a gentleman fell from his horse. In a few minutes he was insensible; he then bled from the nose, seemed to arouse, and asked who struck him. When being put to bed, he retained his consciousness and recollection, then became suddenly comatose. Coma increasing on Monday evening, a crown and a half of a trepan were applied on the left parietal bone. A deep and extensive coagulum was found on the dura mater. There was a constant oozing of blood and formation of coagula. This could only be stopped by the application of lint dipped in spirits of turpentine. Pulse 120, small; countenance pale. He could now articulate, and felt a desire to pass urine; could move the right leg and arm slightly; both had been com-

pletely paralyzed. The dura mater was so extensively detached that the probe passed down to the base of the skull.

23rd. Improving; paralysis gone; mental faculties restored; no coagulum; wound filling up. He was gradually restored to health.

Remarks.—From this example we may adopt it as a rule, in cases in which there is a doubt where the blow was struck, to trepan on the parietal bone, for here the dura mater is more readily detached, being flat, and the course of the artery is here.

Case IV.—1806. A man, aged 50, fell into a sawpit on Tuesday. He was insensible; breathing stertorous and slow; face pale; pupils contracted and immovable; passed urine and fæces involuntarily; had bled from nose, mouth, and left ear. He was bled largely. Next day he died, not having had any convulsions.

Post-mortem.—The dura mater was adherent to the bone; coagulated blood was effused on the pia mater, as large and thick as a dollar; pia mater all through of a red colour, as if smeared over with red currant jelly; a lump of clotted blood issued from the left hemisphere. The pia mater had been ruptured, and the brain appeared as if torn in two spots, each capable of containing the end of the thumb. The brain appeared as if broken down in texture. The brain was lacerated to a less extent on the right side; the ventricles contained serous fluid.

Case V.—September 22, 18—. A gentleman, aged 30, was thrown from a car going rapidly. He bled from the nose. Next day he was brought to town. He lay as if asleep, but was perfectly rational and collected when spoken to. He described all his feelings, and even kept up a conversation on indifferent subjects. He was constantly changing his position, and in doing so required his head to be lifted on turning; breathing slightly stertorous; pulse slow, regular. He was bled on the evening of the accident, and again next morning; he was purged also. He complained of pain on the right side of the head. Wednesday, bled again. Friday, purged; had convulsions at 12 o'clock; they returned five or six times this day; both sides equally convulsed; from this time the pulse always ranged from 110 to 130. The bone was laid bare over the contused spot on the right side of the parietal bone, where a fracture was discovered: two crowns of trepan were applied; while sawing, blood oozed through the perforation to some extent, then

ceased; no convulsions after the trepan until next day, Saturday, when they returned; he was now bled largely; free from convulsions for five or six hours, when they returned again, and again with increased severity on Sunday, when another crown of trepan was applied. Monday he was bled again; the fits recurred; he passed urine and fæces involuntarily; great flatulency; a soft spot was perceived on the dura mater, which allows a finger to sink into it; incision there gave exit to a clear serous fluid. He died. His countenance continued florid until the last day of his illness; and though apparently he slept constantly, he still complained of great want of sleep.

Post mortem.—Dura mater slightly inflamed at the perforation; the vessels of the pia mater seemed to contain air; on the left side no effusion; on the right, coagulated blood was found covering it, increasing towards the base; on removing this, the brain appeared to have three cavities or ulcerations, evidently caused by rupture, for the pia mater remained unbroken.

Case VI.—A man, aged 63, pitched on his head. After the injury he was able to walk, but soon became stupid. Pulse very quick; respiration slow; bleeding from the left ear. He became delirious, and at times convulsed. He was trepanned above the left ear; no extravasation; bone adhered to dura mater.

Post-mortem.—Fracture through the left petrous bone, and through semicircular canals; no blood over or under the dura mater; the right anterior lobe of the brain was literally broken in pieces, with blood effused among its sinuosities.

Case VII.—Sunday, January 11, 1818. I saw, with Mr. Kirby, a boy about twelve years of age. Eight days previously he received an injury from one of his brothers throwing a shoemaker's pincers; the sharp end of one of the handles of which struck him in the left side of the head. In thirty hours after the injury he had vomiting, which still continued. Face swelled; pulse quick; a small wound of the scalp was on the left side of the head, a finger's breadth above the edge of the ear, not larger than would receive the blunt end of a probe. Through this a small portion of brain, evident from its colour and texture, and alternate elevation and subsidence, was protruded. A probe, passed perpendicularly, entered the skull; evidently a piece of bone was driven down and penetrated the dura mater.

Mr. Kirby operated at 5 o'clock, p. m. The operation caused great pain to the patient. Before the teeth of the saw

had entered, a piece of the outer table came off, still we should make the opening to allow the depressed bone to be removed. On raising the circle of bone I remarked some coagulated blood adhered to its internal surface, also to the dura mater very firmly. A small quantity of pus was also discovered. Mr. Kirby proceeded to extract the bone, which was little more than imbedded in the brain. He had a bad night, and some degree of fever.

Jan. 21st. This boy had a perfect recovery, and left hospital some days since.

Case VIII.—October 3rd, 1808. A man, aged 28, on the 1st instant received a blow from the bit of a bridle. On admission into hospital he could not articulate, although he seemed in perfect possession of his senses. On putting out the tongue it was turned towards the right side; on attempting to drink a considerable part was thrown up from the mouth; he could move both hands freely.

A small wound of the scalp was found on the left side, over the posterior part of the frontal bone. The wound was not larger than this, (); no contusion or puffiness; a probe passed in evidently within the cranium. A T-incision was made through the integuments, and a small hole of this size (O) was found in the bone; no fracture leading from it; he was bled and purged.

4th. Three small crowns of a trepan were applied to the neighbourhood of the fracture: the first, behind, showed a small portion of the inner table fractured; second crown, anterior, brought away a small portion of the inner table. He seemed very sensible of pain during the operation. Speech not improved; pulse 80; he was ordered a purging mixture.

7th. Passed a restless night, moaning constantly, putting his hand to his head; makes signs of being in pain; pulse 76. On examining the wound there was about a teaspoonful of pus on the dura mater, which was of a greenish colour, and detached towards the temple, and a small hole in the membrane allowed the probe to pass: to be bled to sixteen ounces.

9th. Bled again; ordered purging powders of calomel and jalap.

10th. Vomited; passed a better night; articulates better; discharge from the wound more copious.

11th. Was said to have had a rigor yesterday evening, but on inquiry it would seem to have been a short convulsion. Had another while his arm was being tied up to take six

ounces of blood; his breathing became stertorous; about 4 o'clock he died.

Post-mortem.—Dura mater had risen above the two first perforations, and was sloughy on separating. It appeared that a sloughy portion of brain passed through the opening which had been observed in the dura mater; this hole was large enough to admit the little finger. Pia mater on the anterior part of the left side redder than the rest. On cutting into the brain a very large abscess, containing an ounce of purulent fluid, was discovered. The medullary portion of brain round this abscess was without the red points, and of a yellow hue. The left lateral ventricle was larger than the right; both contained a quantity of reddish watery fluid.

Case IX.—June 3rd, 18—. A man, aged 54, was flung from his horse, and struck his head against the stump of a tree; he remained senseless for some time, but did not vomit. On recovering from the shock he felt he had lost all power of moving his hands, but could move the legs.

After admission he was bled, but eight ounces only could be abstracted, which induced syncope; ordered purging powders. Next day the power of moving his arms appears a little improved, although not much above that of paralytic limbs; he complained of pain in his neck. Pulse 62; countenance natural; intellect perfectly clear; complained of much pain on pressure over the middle cervical vertebræ, but was more severely pained by a very slight pressure over the right eyebrow, where there was a fulness of the integuments, and the finger discovered a narrow depression extending from the inner angle of the orbit outwards to the temple. He was ordered calomel and jalap, which operated freely.

6th. The purging powders repeated; slept well; pressure on the part of the forehead where the depression was suspected caused a twitching or seemingly involuntary motion of the lower extremities. If the pressure was stronger, it caused him to toss the lower extremities. The upper were not at all affected by these trials. Purgatives and ammonia liniment ordered.

7th. Continued heavy; complained of a little pain in his head; pulse 58; appetite improving.

10th. Bled to fourteen ounces; he can move the right arm freely; the motion of the left very imperfect.

July 4th. Paralysis was observed, on his getting out of bed, to affect the left leg as well as the left arm. Depression of the frontal bone still to be felt, but much less; pressure here caused pain and distortion of the countenance. He was dis-

charged at his own request; intellect clear, and health in other respects good.

Case X.—September 27th, 1827. Twelve days ago a gentleman, aged 36, fell off a pony, and immediately after came to town on a car. Lying in bed, pulse is 60, and regular; no tenderness on pressure over the liver. He complains of pain in the head, which occurs in fits at irregular intervals. Between the attacks of pain he is able to dress himself, and sit up for some hours, when he is obliged to go to bed, an attack of pain coming on.

28th. He died this day at 5 o'clock, P. M.; was reported to have become comatose early in the morning, and continued so until death. There was no examination.

Remarks.—This case is an instance of a rare train of symptoms terminating in death,—altogether different in character from the ordinary symptoms attending on injuries of the head. I ordered calomel, but it had not time to produce any effect.

Case XI.—August 1st, 18—. Fourteen days ago, a boy, aged 11, was thrown from a horse, and fell on his head. He received a flesh wound, which bled freely. After four days he was admitted into hospital. Flesh torn by an angular wound coming over the eyebrow, extending in one direction along the sagittal sutures as far as the lambdoid; on the other to the termination of the coronal at the sphenoid bone. There was discharge of thickened yellowish matter, and the wound looked healthy till the seventh day, when the scalp over the frontal bone sloughed. He did not complain of pain of the head.

July 31st. The granulations flabby, discharging a thin gluey matter. He had a violent rigor, then a hot fit, and was delirious in the evening. Occasional delirium and tendency to rigors continued; and there was great thirst.

August 4th. The small crown of a trepan applied to the black part of the frontal bone gave exit to a teaspoonful of whitish and very fetid matter. After removing the bone, a probe could be passed freely between the dura mater and the skull.

5th. Vomited; had rigors; countenance flushed; pupils dilated on the entrance of light. Another crown of a trepan was applied higher up; no matter underneath it; the dura mater was adherent to the bone; had a violent convulsive fit which lasted half an hour; continued, with various changes, till the 11th, when the pulse was 120; dura mater, which at the time of the operation appeared tense, had now sunk away from the

cranium so as nearly to admit the finger to pass between them; the wound is granulating.

14th. He had three rigors.

17th. Had a severe rigor.

20th. A large abscess on the right shoulder was opened; he had purging; and there was a large discharge of matter from the left ear for the last eight days.

September 3rd. Died.

Post-mortem.—Scalp was slightly adherent to the bone; the dura mater also adhered internally. A large quantity of water flowed out on removing the dura mater; the anterior lobes of the brain adhered firmly, and a small quantity of coagulable lymph covered them. The cerebrum was softer than natural; the ventricles contained a large quantity of water; and the spinal marrow poured out a large quantity on pressure.

Rule to be deduced from this case is,—after trepanning we should pass the probe under the cranium to ascertain the extent of detachment of the dura mater from the bone; for it will be useless to make a perforation in any part thus detached.

CASE XII.—June 26th, 18—. A girl, aged 9, on Wednesday last had her head squeezed between the axletree and the body of a car. She remained speechless for some hours, and had vomiting during the first day. The right parietal bone seemed to have been flattened for more than the size of a crown; this flatness, however, has apparently diminished within the last three days. Near the upper edge of the flattened surface a cavity is to be felt in which the point of the little finger could turn. Pulse 108; skin natural; functions healthy.

30th. Has not had any return of vomiting, nor any symptom of disease whatever since the day after admission. Discharged.

CASE XIII.—A boy, aged 9, was admitted into hospital 26th July, 1834. July 1st, he received a blow on the left side of his head which caused much hemorrhage; he vomited, but did not fall after the blow. He appeared perfectly well from that time until six days ago; his appetite was good; slept well; had no complaint. He then became stupid and sleepy, but disturbed by the slightest noise. Next began bawling night and day until two days since; he was restless, tossing his head about; vomiting; bowels confined; complained of pain in the head. Two days ago he fell asleep, and in a few hours awoke speechless and deaf; had no rigors or convulsions; seems idiotic, and moans constantly; pupils dilated; pulse 94; appetite

quite ravenous. A small wound, nearly cicatrized, was observed at the upper and back part of the parietal bone; an incision through this exposed the pericranium separated from the bone, and a small irregular depression beneath.

27th. Frequent vomiting; trepan removed a piece of bone firmly adhering to the dura mater, which seemed healthy. No matter was discovered; has ptosis of the left lid; the right arm is paralytic; he moves the left constantly to the head. Pulse 82; sat up in bed, and ate greedily.

28th. Recovered sense of hearing; no vomiting; has been taking calomel.

31st. A fungus of a dark colour filled up the wound; it is firm and elastic, with a distinct pulsation. The right side of his face paralytic, also the right arm; passes urine involuntarily.

August 1st. The discharge copious; fungus more prominent; runs to the fire when not watched; eats voraciously; constant yawning.

2nd. Seemed better in the morning; towards evening became restless; had some difficulty in swallowing; coma ensued, and he died.

Post-mortem.—Pericranium and dura mater were separated from the bone; no pus between them. On cutting through the membrane an abscess, containing about four ounces of a thick greenish pus, between the layers of the arachnoid covering the left hemisphere, was opened; it was quite circumscribed, and lined with lymph; it was situated chiefly below the opening. Had pushed the brain to the opposite side; the substance of the affected side was softer and paler than the other.

Case XIV.—A man, aged 26, was ridden over sixteen days ago. He was not rendered insensible; he bled from one ear; complained of great pain and heat on the slightest motion; was rather deaf; blood flowed for two or three days from the ear, gradually changed to a serous discharge. A blister removed the uneasiness of his head, and he left the hospital.

Case XV.—A boy, aged 4, fell down a balustrade, and broke his left humerus. He had also bleeding from the right ear. He awoke every quarter of an hour from sleep, whining. In twenty-four hours the bleeding from the ear changed into a serous discharge, and ceased in four or five days. He recovered perfectly.

Remarks.—These two cases, with one mentioned to me by Mr. Wilmot, prove that bleeding from the ear is not always

fatal, and that the serous discharge, also, when following bleeding, is not fatal.

Case XVI.—A man, about thirty-five years old, received a kick from a horse a little above and behind the ear. A limpid serous discharge took place from the ear, and continued for four or five days. The other symptoms of the injury were not alarming, except that his pulse was quick. He recovered perfectly.

Case XVII.—A boy, aged 4, July 1, received a kick from a horse on the left side of his head. On raising him he vomited; the wound bled freely; vomiting constant until the third day, when he had bleeding from the nose. He walked about for five days after the accident, rested well, and had a good appetite. Fifth day he complained of sickness, and vomited; restless; no pain in his head; no appetite; countenance flushed; fifteenth day he complained of pain in the head; had no shivering since the accident. A small wound on the left parietal bone emits a thin, gleety discharge; pupils dilated; pulse quick and intermittent. A crucial incision was made; and showed a large portion of the parietal bone, next the coronal and sagittal suture, depressed. On removing two small pieces of bone, a large quantity of thick yellow matter flowed from within. The trepan was applied, a portion of depressed bone raised, and some removed. Pulse 120, regular, vomiting ceased. He suffered from hooping-cough, which he had previously to the accident.

August 26th. Constant improvement: discharged; wound granulating, and healthy discharge.

Case XVIII.—A man was admitted on the 9th for a small cut on his head, caused by a board falling on him, by which he was knocked down. No suspicion, until the day before his death, that matter had been lodged in the brain, or that the symptoms, which were mild, indicated any injury of his head, as he only complained of weakness about his heart.

Post-mortem, 27th, having died on the 26th.—While sawing through the frontal bone a quantity of yellow serum flowed out, as also from under the left temporal bone; some purulent matter flowed from under the dura mater, immediately over the left ear; a small quantity of pus covered the dura mater to the extent of the fissure. Here a whitish fungus rose above the dura mater apparently through an opening in the membrane; the edges were ragged. On the surface of the pia mater was a quan-

tity of purulent matter, thick and adherent over the anterior and middle part of the left hemisphere. The pia mater under this was vascular; the effusion extended slightly over the left hemisphere: and at the site of the fissure was a small abscess in the substance of the brain, capable of receiving the end of the fourth finger. Ventricles contained serous fluid.

Case XIX.—February 10, 1813. Opened the head of a man. In cutting through the brain a quantity of good purulent matter flowed out from an abscess capable of holding half a pint, which formed in the posterior part of the brain, and this had been making its way to the surface, for the dura mater had passed through an opening in the bone, and a very thin layer of brain interposed. The walls of the abscess were formed of coagulable lymph, different from brain, and vascular; the right ventricle was distended with sero-purulent fluid, which did not communicate with the abscess.

Case XX.—A man, aged 24, got a kick from a horse on the forehead, on Saturday, March 2, after which he lay for some time insensible, and bled profusely; in two hours afterwards he was brought home, and walked up a few steps of a ladder to his room. He continued perfectly sensible, though quite deaf, till next morning, when he became delirious, so as to require being tied in bed. Pulse 50, full, labouring; countenance flushed; pupils dilated; a semicircular wound, about two inches in length, appeared on the middle of the forehead; he lay quite insensible, but on the application of an instrument, he became perfectly frantic. On separating the pericranium from the bone, a fracture was seen. His legs were perfectly cold, and had been so since the accident; he was bled largely the night before admission; within eight hours after, sixteen ounces of blood were drawn, and a purging enema administered; he slept well; spoke rationally next morning, but was quite deaf. Pulse 68; ordered calomel and scammony.

March 4th. Rested well last night; seems to recover his senses; no pain in the head; less flushed; pulse 70; to repeat powder and enema.

5th. Last night expressed much apprehension of dying, and complained of great pain in his head; had slight startings; extremities cold. Died at 5 o'clock this morning.

Post-mortem.—On raising the dura mater, a large quantity of dark blood was seen covering the pia mater, the veins of which were much distended; no particular appearance of the brain opposite the fracture. On cutting into the posterior

part of the right ventricle, a small quantity of purulent matter poured out; matter was also found in the left ventricle in less quantity; the os frontis was fractured into a number of pieces between the orbits; on the left side, a piece of bone, quite loose, pressed inwards near the crista galli; the base of the brain natural; frontal sinus filled with blood and pus.

CASE XXI.—June 9th. A man, aged 33, had his head squeezed between a mill-wheel and the wall. On admission, the skin was quite cold; in two hours after he became hot; the pulse full and hard; intellect not at all impaired; did not vomit. On the left side of his head, near the top, was a lacerated wound; about three inches of bone were bare and fractured; he was bled to twenty-four ounces, and the bleeding was repeated in the evening to ten ounces: from the 10th he could not swallow, constantly throwing his limbs about; he became insensible. A crown of a trepan was applied a little above the orbit; the dura mater detached, but two dark spots were observed on it; the dura mater rose up into the perforation, and was separated from the bone to a considerable extent: no improvement; passing urine involuntarily.

11th. Dura mater still rising through the perforation, and tense; an incision with the point of a lancet was made, about one-eighth of an inch long, on the dura mater, which gave issue to about a teaspoonful of purulent matter; a vessel was also divided, which bled freely; this vessel could not be seized by the tenaculum, but agaric readily restrained the hemorrhage; the tumours of the dura mater were not at all diminished. He died at 8 o'clock.

Post-mortem.—Dura mater sunk considerably below the bone, red, and had a livid appearance along the orbital process; on raising it, the pia mater of the left hemisphere was seen covered with thick pus; some also was seen on the anterior part of the right side; at the perforation the pia mater was black, and a vessel crossing it; a considerable quantity of water was found in both ventricles, at the junction of the cerebrum and cerebellum the pia mater was covered with a firm, buffy coagulum, extending to the base of the brain; blood was extravasated between the cranium and dura mater and on the left part of the right orbit; the fracture traversed the orbit, and ran on towards the crista galli.

CASE XXII.—A gentleman, aged 28, was struck on October 25th by a watchman's pole; he remained senseless for some time; a small scratch was observed about the middle of the

right eyebrow; this bled rather freely. He said that the sharp point of the pole struck him, for he felt as if the man dragged it out: next day the eye-ball appeared to be protruded from the socket; he was bled; purging pills produced no effect without the aid of an enema; he vomited during the day frequently.

27th. No vomiting; great pain in the anterior part of his head on sitting up; right eye sees well, though painful and protruded.

28th. Pulse 60.

29th. Great pain in the eye; quiet manner, and has become very talkative; pulse 44, irregular; pain intermits; bled.

30th. Incision was made along the orbit, and he was again bled.

November 3rd. Improving for one or two days after. He complained of severe pain in the arm-pits, which, however, relieved the head; during its continuance he felt as if he was out of his mind.

7th. Eye less protruded; pulse 72; sleeps uneasy at night, and complained of pain in the temple, which caused great agony; the incision of the orbit was increased, but nothing could be discovered; worse; pulse from 50 to 60, or 44, quickened on the slightest exertion.

8th. Bled to twenty ounces; pulse became rapid, up to 90; eye daily more protruded, still sound. He died on the 10th of November. At times he raved, yet he always answered rationally. Previously to death he had two fits, in which the left arm and leg were less moved than the right, but were not paralytic.

Post-mortem.—Dura mater healthy; slight red tinge over the pia mater, as if painted over; the anterior lobes were of a yellow colour, flaccid, and gave the sensation of fluctuation; they contained an abscess with healthy pus, which extended from behind the middle lobe forwards towards the sphenoid bone, where it adhered to the dura mater, which was detached from the bone, except a small portion of the orbit; through this there was a communication with the abscess in the upper part of the orbit, a very short distance from the incision.

The error in this case was in supposing the blow to be made by a blunt instrument; if this was so, there would have been ecchymosis, and if merely a scratch, it would not have rendered him senseless.

I have selected these from a large collection of cases of injuries of the head, as possessing most points of interest. At the time they were reported, thirty or forty years ago, injuries of

the head were of much more frequent occurrence than at present; the hospital was then seldom without two or three severe cases of the injury together, whereas, at the present time, we do not meet with the same number of cases in a month. Consideration of the cases may lead us to hesitate before adopting the received opinion concerning the various symptoms and effects of these injuries.

First, As to the difference said to exist between the symptoms indicating concussion or compression, and which has so engaged the ingenuity of surgeons, it had frequently been asserted by my father in his lectures, that he never saw a case where the head was examined after death, that some alteration could not be discovered sufficient to account for the patient's death, without resorting to the vague expression of concussion; and if we come to apply the observation and reasoning which is used in the case of injuries of other parts to those of the head, we shall obtain clearer views of the difference between concussion and compression without entirely denying the existence of the former state.

In other severe injuries, we know the first effect is the inducing that state which is denominated shock, or stage of collapse, and that this is in proportion to the severity of the injury, and generally goes off in a longer or shorter time; yet that it at times does prove fatal,—still the cause remains evident.

So, in injuries of the head, the first effect of the blow, if severe, is to cause that state of collapse, shock, or concussion; but the blow which had caused it must have also produced some very evident changes in the structure and functions of the brain generally manifest to our senses. Yet a case may occur where the patient may have died during the stage of collapse, and the disorganization of the brain produced by the blow may be of such a nature as would not present changes of structure evident to our senses, till the stage of re-action had ensued; nevertheless such a combination must be of very rare occurrence.

The next point I would direct attention to is the explanation adopted regarding the cause of compression from effusion of blood. From the time of Pott, it has been said that the blow caused a rupture of minute vessels, connecting the dura mater and the skull; these poured out their blood slowly and gradually; this gave rise to the second stupefaction: but I think it a much more probable explanation, and one more consistent with the known action of such minute vessels, to say, that the first effect of the blow is to cause the separation of the dura mater from the bone, by tearing these vessels,—that they then

pour out their blood until the space thus made is filled up, and when this is effected, no more blood can escape from them, as they cannot enlarge this space.

That another immediate effect of the blow is to produce such a state of the substance of the brain itself that it becomes shrunken; as has been frequently observed when the head has been examined soon after sudden death produced by a blow, the brain being found not to fill up the cavity of the skull. This state must also exist to allow the effusion to progress without strong action in the vessels; and when the re-action would set in, and the brain again rise to its former dimensions, then the symptoms of pressure would show themselves, and would differ from those previously observed, which partook more of the nature of dependency on concussion or shock.

The first of these cases shows a great extent of extravasation, and would lead us to resort at times to a very early operation, and that with some prospect of success; and although the quantity of blood effused, and of brain displaced, were very considerable indeed, yet the very evident improvement, unfortunately not permanent in the first case, might induce the consideration, whether the result might not have been different had the operation been performed even earlier, and the brain allowed sooner to resume its former dimensions. We cannot read these cases without also seeing how difficulty and doubt may arise even during an operation which would confuse many surgeons, and the determination of which must have such influence on the subsequent treatment; and we must also be struck with the ready, simple, and effectual expedient which presented itself to the mind to clear up the doubt, and show that though the injury was extensive, yet the dura mater was uninjured.

There are several cases recorded in which the blood was effused on the pia mater and the base of the brain; they, however, do not present any peculiarity of symptoms, treatment, or termination, to render them of importance, nor do they differ from many such which have been published. I may observe that, previously to the year 1810, my father remarked the occurrence of rupture of the structures of the brain in consequence of injury, and the simple fact of the pia mater being uninjured showed that the rupture was not an effect of either the instruments or bone driven in. Then, as to the invasion of inflammation or suppuration within the skull, the symptoms and times laid down are not to be entirely relied on, for we find matter may form in forty-eight hours, and we may have a very large abscess in the substance of the brain itself without the

diagnostic rigors and fever, or even without any symptoms which would lead us to suspect that organ to be the seat of the diseased action; we may also observe that the matter may form round a depressed bone, or on a circumscribed cyst external to or in the substance of the brain, or diffused over the entire surface of one hemisphere; and that the situation of the pus is as difficult to discover as that of effusion of blood, and our prospect of affording relief by an operation is not so favourable as in the latter result of the injury. It is to be regretted surgeons have not directed their attention more to the difference of the symptoms excited by injury in different parts of the brain itself. We find injuries affecting the anterior lobes of the brain induce a train of symptoms differing materially from those which injuries to the posterior lobes or base of the brain present.

I have seen several cases in which the bones of the orbit have been pushed in, or by a blow on the nose the ethmoid bone was driven in on the brain; and in every case the symptoms differed materially from those generally observed in other injuries of the head. In almost all, the patient seemed to complain little of the head, merely of heaviness in it, or of slight headach, and he was able to sit up, move about, talking and eating as if in health, for a period ranging from one to three or four days; he would then suddenly become comatose, and the almost invariable termination would be in death. There are many such cases recorded, and I have seen several, but it is to be regretted that no one has yet made a collection of them, or drawn attention to the difference of the symptoms commonly attending on and distinguishing this form of injury.

There is another remark which a consideration of these cases suggests: that they almost invariably terminated fatally and certainly would induce us to give a more unfavourable prognosis where there is great torpidity of the bowels, when we must administer purgatives in large doses, both by the mouth and rectum, to produce any effect; while in those cases in which the usual purgatives act in the ordinary doses, we might entertain a much more favourable expectation of recovery. There are many other matters of inquiry which these cases must suggest to every practical mind, but which it would occupy too much space even to refer to here.

Art. VI.—*Observations upon Lipoma of the Nose.* By Samuel G. Wilmot, M. D., Surgeon to Steevens' Hospital, Lecturer on Surgery in the Carmichael School of Medicine, &c. &c.

Tumours of the simplest nature become the subject of surgical operation either from their interfering with important parts, from the inconvenience of their position, or from their unsightly or disfiguring appearance. For the two latter reasons, that curious growth from the nose which has received the name of "Lipoma" especially demands an operation for its removal. These tumours, growing from the extremity and alæ of the nose, when they acquire a large size hang downwards, disfiguring the individual so remarkably that he is compelled to observe the strictest retirement as the only means of screening himself from the unpleasant gaze of the public, and particularly from the juvenile part of it, who are apt, under such circumstances, to indulge their curiosity and risibility to rather a disagreeable extent.

But the annoyance arising from the disfigurement of a feature, the perfection of which is generally admitted to be, perhaps, not the least essential to beauty, is probably a secondary grievance compared with others to which this affection leads; for when the tumours attain a very large size,—which in some instances they do to an enormous degree,—they fall down over the mouth, thereby interfering with the exercise of the sense of smell, impeding respiration, and proving a source of great inconvenience in eating and drinking. Sometimes these lipomatous growths occur singly; but oftener two, three, or more, are to be found, varying in size. In the third volume of the Memoires de l'Académie Royale de Chirurgie, a plate is given by M. Civadier, showing two examples of this affection. In one case, four tumours are represented as having grown from both alæ of the nose, and which increased to such a magnitude that, to use M. Civadier's own words, "qu'elles lui formoient les narines, couvroient entiérement la bouche, et tomboient jusqu'au bas du menton." In the other case, five tumours are pictured, one very large, and the four others small.

In the case in which Mr. Hey removed a large growth of this description,—a report of which, together with a plate, is to be found in the third edition of his works,—"the tumour extended to the lower part of the under lip, and compressed his mouth and nostrils so much when he lay down to sleep, that he was obliged to keep a tin tube within one of his nostrils, that he might be enabled to breathe. He also generally wore this tube in the daytime, as the pressure which his mouth and

nostrils suffered at all times from the bulk of his nose rendered breathing without this instrument somewhat troublesome. The tumour was in part immersed in the liquids which he drank, unless it was supported by his hand."

The nature of these growths was evidently quite misunderstood until lately. M. Civadier viewed the tumours he removed as carcinomatous; for in the work already alluded to he heads the account of the two cases he gives thus:—"Description de plusieurs Tumeurs Carcinomateuses situées sur le nez." M. Delonnes, also, in a pamphlet published subsequently, and entitled "The New Progress of Surgery in France," calls the same affection "a sarcoma tending to carcinoma." It is now well known, however, that this disease is quite benign in its nature, being a hypertrophied condition of the skin and subjacent areolar tissue, with great enlargement of the sebaceous follicles. Dalrymple gives the following description of the affection:—"This disease cannot be called simple hypertrophy, since this tissue has lost its natural pliancy and natural colour; but rather approaches to a state of *elephantiasis*, in which the cellularity is partially destroyed, and a fibro-cellular structure substituted. The mass presents, externally, a nodulated surface of a purple or deep red colour, traversed by numerous minute and tortuous vessels. The larger separated portions are frequently divided from each other by deep fissures, occupying in many cases the convexities of the alæ and extremity of the nose. Where the disease has been of long standing, the altered state of skin advances as high as the junction of the frontal with the nasal integuments, seldom encroaching much on the palpebral furrows laterally, but accompanied, in the majority of instances, by a mottled state of the skin of the cheek, corresponding in colour and general appearance with the tumour of the nose. The sebaceous follicles are greatly enlarged; and their secretion is not only increased in quantity, but unless extreme cleanliness is attended to, it is offensive in smell, and excoriates the surrounding skin."

Notwithstanding the simple nature of the disease, it would seem that until recently surgeons were timid in operating upon it, apparently from the dread of hemorrhage. Sir W. Blizard is reported to have lost a patient from bleeding, upon whom he operated for the removal of a growth of this kind. Mr. Liston, however, in alluding to this unfortunate case, suggests the probability that there was an error in the diagnosis, and that the tumour must have been of the character of aneurism by anastomosis, and not lipoma. In the case operated

upon by Mr. Hey, the hemorrhage, he states, was so considerable that the patient, although a stout man, nearly fainted. It is natural to suppose that a hypertrophied structure, the growth of many years, should be extremely vascular, and consequently bleed smartly upon being cut; but this is no argument against the operation,—it is merely a reason for greater energy and quickness upon the part of the operator and his assistants. Mr. Liston says he has removed the disease "in a great many cases without one untoward accident." Mr. Syme has also removed a very large lipomatous growth from the nose of a man aged upwards of 80 (the case is recorded in the Edinburgh Monthly Journal for September, 1852), without the least unpleasant consequence; and it is now quite evident, that there is no ground for refusing to rid any individual of so disagreeable and disfiguring a companion.

The following case, in which I was recently called upon to operate, is a good example of lipomatous disease, and illustrates the perfect success of the operation for its removal:—

I was requested by Dr. Tyler to accompany him to a short distance beyond Derry, for the purpose of removing a lipomatous excrescence from the nose of a gentleman, to whom the inconvenience arising from it became no longer endurable. The patient was sixty-five years of age, of healthy constitution, stout make, and rather florid complexion. The disease was of sixteen years' growth, and had increased more rapidly within the last five years than previously. There were two tumours. One, the larger of the two, equalled in bulk a good-sized apple; it was quite pendulous, and hung down over the mouth, being attached by a broad base, which extended from about the middle of the mesial line of the nose to its extreme point, and laterally upon each ala for a short distance: thus, the lower part of the nose was regularly imbedded, as it were, in the excrescence. The second tumour was about one-fourth of the size of the other, and was also pendulous; its base, which was rather oval in shape, being attached to the left alar cartilage. Upon raising up the tumours, the margin of the nostrils and the columna were observed to be perfectly free, so that it was obvious the morbid growth could be removed without injuring the proper form of the nose. The diseased mass was flaccid and corrugated, and when handled conveyed a peculiar soft, spongy sensation, with an obscure feeling of fluctuation, and upon pressing it firmly a quantity of sebaceous matter exuded from several points. The skin of the nose, generally, was coarse and rough, being studded over with enlarged crypts; and at the lower part of the right ala was a

tubercle, evidently the commencement of another tumour. The larger growth caused the greatest inconvenience: when the patient lay down to sleep, he was obliged, in order to breathe freely, to raise up the mass by means of a band passed beneath it and tied behind the head; and in eating and drinking much annoyance was experienced: besides this, the disfigurement from it was very remarkable.

With the assistance of Dr. M'Intire, of the Muff Dispensary, and Dr. Hunter, of Newtownlimavady, the tumour was removed. The large growth was first excised in the following manner:—The index finger of one of the assistants having—as recommended by Mr. Liston—been introduced into the right nostril, to give warning should the knife be carried too close to the cartilage, an incision was made along the right side of the base of the tumour, in a semicircular direction, extending from the mesial line above, running along the edge of the naris, and terminating at the point of the nose; the tumour was then dissected up to the median line. Next, the finger having been introduced into the left nostril, a similar incision was made along the left border of the base of the tumour, and this side was dissected up as far as the median line. When the tumour was removed, the cut surface was clipped with a scissors, to render it as smooth and even as possible. The only difficulty in the operation was the avoiding too close encroachment on the margin of the nares, and injury to the cartilage in dissecting round it in the mesial line; for the lower part of the nose was so buried in the base of the tumour, and the structure was so dense, that mischief might readily have been done to the cartilage if due care had not been taken.

The smaller tumour was removed by an elliptical incision, which left but a narrow cut.

The bleeding during the operation was very smart; there were several arteries, fully as large as the coronary of lip, divided, but after the dissection of the tumour was completed, it was immediately commanded by pressing a small piece of dry sponge firmly for a few moments against the surface, after which the vessels were taken up and secured separately.

For the first few days, water dressing was kept to the part, after which a lotion of sulphate of zinc, and subsequently one of borax, were applied. In less than four weeks the two cut surfaces were completely cicatrized.

After removal, the tumours were found to weigh nearly four ounces. Their structure, to the naked eye, appears to be composed of longitudinal fibres, taking a semicircular course, and bound so closely together that no trace of cellularity re-

mains. It is of an ashy-white colour, and extremely dense, which fully accounts for the sensation conveyed in dissecting up the tumour; for the point of the knife regularly grated against it, as if it were cutting through a gritty substance. Imbedded in it were several cysts, distended with atheromatous matter, varying from the size of a small pea to that of a hazel-nut, and which were doubtless the cause of the obscure feeling of fluctuation which the mass yielded.

While this paper was passing through the press I received a letter from Dr. M'Intire, from which the following is an extract:—"The operation has proved very satisfactory in its result. Our patient is now a very well-looking man, with a well-shaped and proportionate nose."

In the accompanying lithograph (Plate No. 5), an accurate representation is given of this unusually large lipomatous growth, and the inconvenience arising from it may be readily imagined.

Art. VII.—*Contributions to the Pathology of the Heart.* By Benjamin George M'Dowel, A.B., M.D., one of the Physicians to the Whitworth and Hardwicke Hospital, Lecturer on Anatomy and Physiology in the Carmichael (formerly the Richmond Hospital) School of Anatomy, Medicine, and Surgery, &c. &c.

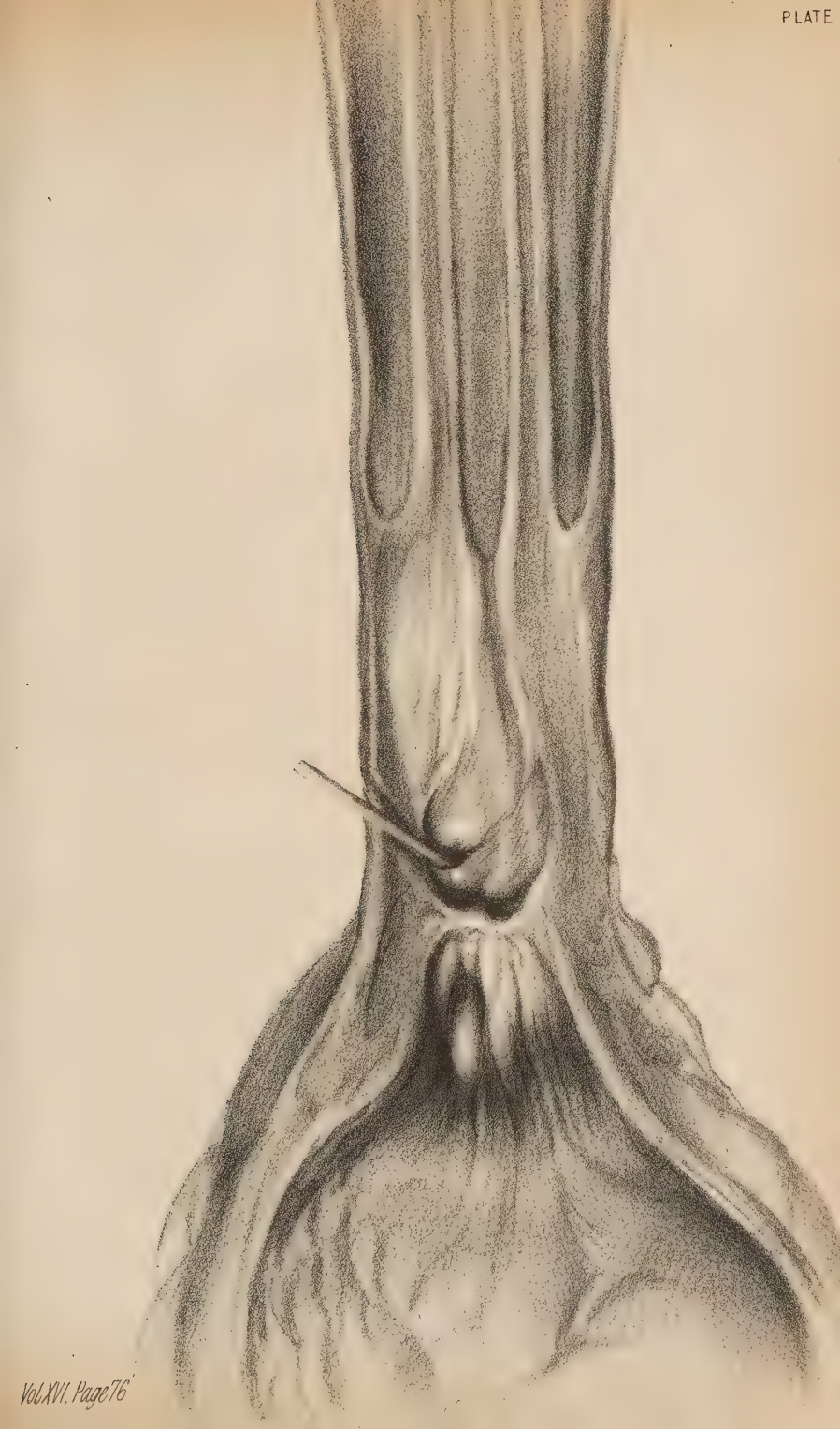
(*Continued from* Vol. XIV. p. 383.)

In the twenty-eighth Number of the present series of this Journal I published a series of cases illustrative of the pathology of dilatation of the heart.

These cases were arranged so as to form two series. In the first, were placed examples of dilatation unaccompanied by valvular disease (Cases I. II. III. IV.). In the second, were grouped together instances in which dilatation had supervened on diseases of the valves. The latter were adduced to illustrate the identity of symptoms which arise in cases even of dissimilar valvular diseases, when during their progress they become complicated with dilatation of the heart's cavities. From the examples in the first group, the clinical history of dilatation of the heart is directly deducible, since in them that condition formed the sole lesion.

Amongst the influences which a consideration of these cases suggested was the following:—

"Dilatation may produce the general symptoms of obstruc-



tive valvular disease; or, when accompanied by softening, it may develop the signs which specially indicate mitral contraction."

I have since then, on two occasions, had the opportunity of verifying this observation, and shall take this opportunity of briefly noticing two cases, which in all essential characters belong to the same category as Cases I. II. III. and IV. of my former essay.

Case XI.—*Dilatation of the Ventricles. Softening of the Muscular Tissue. Signs of Obstructed Circulation. No Valvular Disease.*

David Ryan, aged 52, admitted into the Whitworth Hospital under my care, January 4, 1853.

History.—He was formerly in the army, and had led a very dissipated life; when he left the service his intemperate habits, so far from being abandoned, were more or less freely indulged in for many years afterwards. He had suffered for a considerable period from the symptoms of heart disease, as palpitations and hurried breathing on making slight exertions, but had, nevertheless, been able to attend to even a laborious employment without more than temporary inconvenience. Four months before he came under my observation, however, he contracted a heavy cold, which he neglected until his breathing became so much affected that he was compelled to give up his employment and apply for hospital relief.

Symptoms on Admission.—There was excessive anasarca, with some effusion into the abdomen; the patient also complained of urgent dyspnœa, and of cough, with violent palpitations of the heart. The face was bloated, cheeks livid, jugular veins excessively distended; extreme irregularity of the heart and of the radial pulse was observed; the pulse at the wrist was disproportionately small as compared with the heart; percussion showed that the heart was much enlarged, especially in the transverse direction; its impulse was plainly visible in the epigastrium, denoting enlargement of the right cavities; *no abnormal bruit* accompanied its action; the liver was enlarged, the lungs were congested inferiorly, and the urine was albuminous.

Treatment was productive of but little benefit. Pulmonary hemorrhage was observed on two occasions; dropsical effusions increased; the legs became greatly distended, and the skin tense and discoloured; finally, gangrene of the extremi-

ties became fully developed, typhoid symptoms set in, and death ensued January 21st.

Post-mortem Examination.—The heart weighed eighteen ounces and a half, and was excessively enlarged; the muscular tissue of the ventricles was softened, and was not only more friable but paler than natural; the left ventricle was much dilated, and its walls moderately hypertrophied; in the right ventricle dilatation was accompanied by but slight increase in the thickness of the muscular parietes; both auricles were very capacious; *the valves were efficient without an exception;* the aorta was healthy; the kidneys were extensively diseased; liver enlarged, congested, and friable; spleen firm, but of normal size; lastly, there were evidences of peritonitis present, for recent lymph, of a greenish colour, was effused around the intestines, glueing their several coils together. It is worthy of observation, that this peritoneal inflammation—which, however, was of recent occurrence—was altogether latent, none of the symptoms which usually attend that affection having been developed.

In this instance there was no valvular disease, and hence excessive dilatation existed as the sole cardiac lesion. The symptoms of obstructed circulation, which were so fully developed, are thus directly connected with that particular morbid condition. Still further, the almost complete identity of the symptoms just detailed (owing, as I conceive, to the co-existence of muscular softening) with those which usually occur as the result of *obstructive mitral disease,* needs only to be alluded to; I refer more particularly to jugular distention, extreme dropsy, irregularity and feebleness of pulse, pulmonary hemorrhage, and gangrene of the lower extremities.

It is probable that in this instance *renal disorganization* is to be referred to as the *primary cause* of dilatation of the heart, and as the connexion between these two morbid states has been already adverted to in the former part of this paper, page 382, and Cases iv. and v., no further allusion to it is now necessary.

I would here observe that of all forms of organic dropsy that which depends on dilatation of the heart with softening for its cause appears to me to be that in which medicine is least efficacious. We occasionally see even extreme dropsical effusions, the effect of obstructive valvular disease, absorbed with great rapidity under judicious treatment. Not so in general the dropsy which depends on a dilated and softened heart. The difference in the result of treatment in the two classes of cases

may perhaps depend on this circumstance, that in the one, the muscular energy of the heart is unimpaired, so that, when vascular congestion is relieved and the heart unloaded, a free capillary circulation is promoted, and the functions of healthy nutrition are resumed; whilst in the case of the dilated heart, no such restoration to healthy functions can occur, as the heart's vigour, owing to change of form and perhaps of structure (softening) is permanently impaired.

Case XII.—*Dilatation of the Ventricles. Softening of the Muscular Tissue. Signs of Obstructed Circulation. No Valvular Disease.*

James Kavanagh, aged 38, was admitted under my care the 25th of June, 1853. His face was pale and anxious, the surface of the body presented that peculiar waxy, pallid appearance which so generally indicates an impoverished condition of blood (*spanæmia*). The lower extremities were œdematous, and excessively cold; he complained a good deal of palpitations, and of a distressing feeling of exhaustion, but his chief suffering was from dyspnœa; he could seldom bear to lie down for more than a very brief period. After the exertion of speaking for a few minutes he would become perfectly breathless. During the night there were paroxysmal seizures, like those of *angina*, accompanied by substernal pain, undefinable anxiety, breathlessness, and coldness of the extremities.

The pulse was small, weak, and irregular. *Venous pulsation* was very manifest in the external jugulars; the blood rose and fell in these vessels rhythmically with the heart's action, and the current always came from below. The heart beat over a large surface with varying force; its sounds were confused by irregularity of action, but I was satisfied of the absence of any abnormal bruit. The heart's action extended into the epigastrium, and pressure here gave much uneasiness. There was extensive cardiac dulness, and the apex seemed to impinge against a large portion of the parietes.

Stimulants alone seemed to afford any relief. After a short time he became so weak as to be unable to sit up. His sufferings from dyspnœa were now extreme, the pulse became more and more feeble, and death ensued July 4th.

Post-mortem Examination.—The surface of the body presented the peculiar pale colour which had characterized it during life. The areolar tissue generally was infiltrated with serum. There was ascites to a moderate extent. The liver was congested. The kidneys appeared healthy; the heart was much

enlarged, and its apex was remarkably rounded. The ventricles were greatly dilated, whilst their walls were but moderately increased in thickness. The muscular tissue, however, was obviously in an unhealthy condition; it was very pale in colour, and so soft that the finger could easily be pushed through it.

Coagula were contained in both sides of the heart; that in the right cavities was of such firm consistence as to appear to have been formed before death. The auriculo-ventricular openings were dilated, especially that of the right side, which was enlarged to at least double its normal size. The right auricle was very capacious, and its walls were thinner than usual. The valves, without exception, were healthy, but regurgitation must have been freely permitted through the tricuspid orifice.

The pleura on the left side of the chest was greatly thickened; the left lung, which was universally adherent to the parietes of the chest, was much diminished in volume, and condensed in its structure. The tubes were not dilated; the right lung was of large size. In its lower lobe were numerous dark-coloured firm masses, of various sizes, the result of pulmonary apoplexy.

In all its essential characters this case will be found to be identical with the preceding, and with those reported in Section I., so that any detailed commentary on it would be superfluous. It shows the dependence of dilated orifices on dilated cavities, and further illustrates the observation already made, that "an exceedingly dilated heart, by its inefficiency to unload its chambers, produces symptoms similar to those which are the result of obstructive valvular disease." Nor is this apparent anomaly an isolated fact belonging specially to the pathology of the heart. In similar structures, analogous phenomena are not unfamiliar to us. I will, however, allude to only one instance of a similar kind for the sake of illustration, viz., that excessive dilatation of the œsophagus is accompanied by the same symptoms as usually denote organic stricture (mechanical obstruction) of that tube.

Angina in this instance is found associated with dilatation, as was also observed in Cases III. V. and VII.

From observing the distinct regurgitant pulsation in the jugular veins, it was predicated with tolerable certainty during life, that regurgitation through the right auriculo-ventricular opening was freely allowed, and the condition of the parts after death fully corroborated this opinion. That in this instance such regurgitation failed to develop an endocardial murmur, may perhaps be accounted for by the softened state of the muscular tissue of the right ventricle, which we may suppose, ow-

ing to this condition, to have been incapable of communicating to the blood an impetus sufficient to generate an audible bruit. That the circulation was carried on with much languor by the right side of the heart was amply proved by the formation of coagula in its cavities before life became extinct. I will only further add, that in Cases XIV. and XV., to be noticed hereafter, in both of which the right ventricle was much hypertrophied, and the muscular tissue healthy, tricuspid regurgitation was accompanied by a loud and persistent bellows murmur.

(*To be continued.*)

ART. VIII.—*Report on the Epidemic Dysentery prevalent in the North of Ireland in* 1852*; based on Returns collected under the direction of a Committee of Medical Practitioners of Belfast; and drawn up* by A. G. MALCOLM, M.D., Physician to the General Hospital, Belfast.

IN the autum of 1852 it was observed by several physicians in Belfast that the ordinary diarrhœa incident to the season was more than usually complicated with choleric, and especially with dysenteric, disease. The latter malady, indeed, presented, in a considerable proportion of cases, a very aggravated type, and besides exhibited such unusual forms, both as regards duration and sequence of phenomena, that the idea of instituting an inquiry into the nature and treatment of the epidemic, upon an extended scale, was earnestly entertained by the reporter and a few of his medical friends.

Accordingly, a meeting was held upon the 14th of September, at which the propriety of commencing the inquiry was almost unanimously approved of, and a Committee appointed to carry out the details. On this Committee there were three members of the hospital staff, four of the dispensary staff, two private physicians, and eight general practitioners.

A circular, including a prospectus of the plan, a set of queries designed to elicit the chief points of the desired information, and a schedule for the brief reporting of cases illustrative of practice in the epidemic, was issued to medical practitioners in most of the towns in Ulster, on the 22nd of September, and from time to time subsequently, by several members of the Committee.

Replies were received, in due course, from sixty-three practitioners holding hospital or dispensary appointments, and forty-four physicians and surgeons engaged solely in private practice.

These practitioners were resident in forty-seven different localities. In thirteen of these the disease was epidemic; eighteen

presented but a few cases, and in the remaining sixteen there was a total absence of the malady. In addition to the replies made in the printed query-sheet, and the reports of forty cases illustrative of the epidemic, supplementary notices were received from practitioners in Belfast, Carrickfergus, Hollywood, Lifford, &c., besides notes of similar epidemics in 1847, 1849, and 1851, in various places in the North of Ireland, and of the Indian dysentery by two northern practitioners who have had extensive experience in the East.

It will be perceived from the returns thus collected, how abundant material for the elaboration of a report has been obtained; and, without further preface, I shall at once proceed to put my readers in possession of the practical information which this inquiry has educed.

And first, as to the general character of the epidemic in the localities visited, viewed in connexion with their sanitary and other external physical features. They shall be mentioned in the extent of their population, so far as known.

The epidemic commenced in Belfast in the beginning of July, reached its maximum figure in the week ending 4th of September, and subsided to the ordinary standard in the beginning of November. In this space of time there were registered on the books of the dispensary attendants a total of 1121 cases of diarrhœa and dysentery, including 345 of the former, and 776 of the latter. The annexed Table will show the order of distribution in the different districts into which the town is divided, besides the progressive *rise* and *decline* of the epidemic. To judge of the extent of the epidemic, compared with the ordinary amount of the same malady at other seasons, it will be sufficient to state that, for some weeks before and after the epidemic period, the average only reached ten cases, of which five were dysentery. We shall thus see that a maximum of twelve times this amount, and eighteen times the number in dysentery alone, was obtained at the acme of the epidemic.

Any one cognizant of the situation and sanitary character of Belfast will not be surprised to learn that epidemics have been of frequent occurrence in this now prosperous locality, ever since it deserved the appellation of town. Its low situation, three-fourths of its area being nearly a dead level, and a large portion being also under high water-mark, are circumstances which render it exceedingly insusceptible of perfect drainage, and, at the same time, calculated to promote atmospheric humidity. These facts, taken in connexion with the great and increasing population (100,300 according to the Census of 1851), and the vast

RETURNS *of Weekly Admissions of Dysentery and Diarrhœa in the* BELFAST DISPENSARY, *from June* 27 *to November* 6, 1852, *arranged according to the Districts of the Town.*

DISEASE.	JULY.					AUGUST.				SEPTEMBER.				OCTOBER.					NOV.	TOTALS.		DISTRICTS.
	3	10	17	24	31	7	14	21	28	4	11	18	25	2	9	16	23	30	6			
Dysentery, .	3	3	2	6	5	15	8	8	11	14	12	10	8	4	1	1	0	0	0	111	119	Shankhill.
Diarrhœa, .	0	0	1	0	0	0	0	2	0	1	0	0	1	1	1	0	1	0	1	8		
Dysentery, .	0	3	3	4	0	5	7	7	4	8	10	5	6	5	4	4	1	2	1	79	178	Hospital.
Diarrhœa, .	1	2	4	8	5	17	9	5	8	8	5	7	5	4	1	2	1	6	1	99		
Dysentery, .	4	1	3	9	8	6	12	5	6	13	9	4	8	5	4	7	1	1	2	108	147	Dock.
Diarrhœa, .	0	1	4	4	5	3	3	1	2	6	1	3	2	0	2	0	1	0	1	39		
Dysentery, .	0	1	0	2	4	7	4	7	9	13	7	7	8	5	2	1	1	2	0	80	125	Cromac.
Diarrhœa, .	0	3	3	1	5	3	6	7	1	5	2	5	1	1	0	0	0	2	0	45		
Dysentery, .	4	4	4	9	7	12	11	13	31	26	25	19	17	21	14	6	13	3	3	251	353	College.
Diarrhœa, .	2	6	3	7	8	2	9	12	13	11	11	2	4	4	3	1	3	1	0	102		
Dysentery, .	0	1	0	3	5	4	12	8	10	17	19	22	8	10	10	13	3	0	2	147	199	Smithfield.
Diarrhœa, .	2	1	2	6	3	15	4	4	7	2	1	3	1	0	1	0	0	0	0	52		
Total Dysen.	11	13	12	33	29	49	54	48	71	91	82	67	55	50	35	32	19	8	7	776	1121	
Total Diarrh.	5	13	17	26	26	40	31	31	31	33	20	20	14	9	8	3	6	9	3	345		
TOTAL, . . .	16	26	29	59	55	89	85	79	102	124	102	87	69	59	43	35	25	17	10	1121		

proportion of the operative class being located in old and ill-ventilated, or new and ill-drained tenements, will indicate sufficiently a high predisposition to dysenteric outbreaks.

The epidemic appeared chiefly among the poorer classes, and included a considerable variety of forms, as cases of pure diarrhœa; of English cholera: a form closely resembling the Indian malady; pure inflammatory dysentery; a typhoid type of the same; a chronic irritative form, with little constitutional disturbance, and seemingly uninfluenced by any mode of treatment, yet eventually yielding; modifications characterized by relapses; by great gastric irritability; by retention of alvine excretions; by much hemorrhage; by cerebral disturbance; and lastly, as a complication of continued fever. The prevalent type appeared to be the sthenic or inflammatory; and the few post-mortem examinations recorded distinctly indicated this form.

The returns from Belfast embrace the experience of four hospital physicians, six dispensary attendants, six private physicians, and eight general practitioners.

The city of Londonderry ranks next to Belfast in population, which amounted to 19,888 in 1851. Replies were received from Dr. William Browne and Dr. Barnewall White, the latter, physician to the Fever Hospital and Workhouse. Both concur in stating the absence of dysentery as an epidemic. Dr. White mentions having had but 20 cases of the ordinary dysentery in hospital practice; that the mortality was about 1 in 4, and the disease more under the control of remedies than in previous years. Londonderry, though, like Belfast, a maritime city, is considerably elevated, being situated on a hill 119 feet above high water, thus possessing great comparative advantages in the important matter of drainage.

Newry, containing 13,491 inhabitants, was represented in this inquiry by Dr. Morrison, Physician to the Fever Hospital and Dispensary; Dr. Erskine; Dr. Charles Molloy, Medical Officer of Newry and Crowban Dispensary; Dr. William Starkey; and Dr. W. A. Davis, Physician to the Newry Union Fever Hospital and Workhouse. Returns and cases are furnished by three of these gentlemen. We may, therefore, presume that by them the disease was considered to prevail in an epidemic form; at the same time it is proper to mention that the experience of Drs. Erskine and Davis led them to report not merely an absence of the epidemic in 1852, but a singular immunity from epidemic diseases in general for some years past. Most of the cases in this locality were of the sthenic inflammatory type. A large portion of this town is extremely

low in situation, and lies on the banks of the Newry Water and Canal.

Armagh (9306 inhabitants) is situated on the declivity of a lofty eminence, around the base of which runs the river Callan, a tributary to the Blackwater. Returns were received from Dr. Thomas Cuming, Physician to the Lunatic Asylum; Dr. Alexander Robinson, Surgeon to the County Infirmary and Gaol; Dr. J. L. Riggs, Medical Officer to the Union Hospital; Mr. J. Leslie, Surgeon to the Union Dispensary; and Messrs. M. and J. Armstrong, General Practitioners. Drs. Robinson and Riggs report as to the existence only of the usual autumnal diarrhœa; and the other gentlemen concur in the opinion that it was not epidemic. The dispensary practice of Surgeon Leslie supplied him with only 14 cases from June to November last, and these generally of the milder forms. Dr. Cuming also saw but little of the disease. His experience, however, of 5 cases favours the idea of the inflammatory character as the type observed.

From Newtownards (9567 inhabitants) we have received a return from Dr. David Jamieson, Surgeon to the Union Hospital. This town is situated on Strangford Lough, at its northern extremity, and is very level, but surrounded with hills. The disease appears to have been here moderately epidemic, and of the sub-acute and typhoid varieties.

From Lisburn (6569 inhabitants) we received returns from Dr. J. Campbell, Physician to the Fever and Union Hospitals; Dr. Kelso, to the Dispensary; and Surgeon M'Harg, General Practitioner. The disease was here decidedly epidemic. In many instances choleric symptoms ushered in the malady, which, in this form, was unusually severe, and resisted ordinary treatment. The other cases presented nothing peculiar. This town, though situated on the river Lagan, is for the most part considerably elevated, but in the neglected condition of its inferior lanes and courts there are abundant anti-sanitary influences at work to foster epidemic disease. Of late years its Board of Health has been obliged to confess its many short-comings in a sanitary point of view.

Dr. William Black, of Ballymena (6136 inhabitants), reports that those cases of dysentery that he was called upon to treat presented the usual symptoms, and yielded to ordinary treatment. The disease was of a mild character, and in extent could not be said to have been at all epidemic. The town is considerably elevated, situate on the small river Braid, a tributary to the Mayne Water, and its sanitary condition above the usual character.

Dr. John West, R. N.; Messrs. Adam Nixon, Surgeon to the Union Dispensary; and J. Kiernan, of Enniskillen, concur in stating the non-appearance of the epidemic in this locality. Mr. Nixon states that dysentery has not been epidemic since the famine in 1847 and 1848, and that he has not seen or heard of more than 6 cases in that district in the interval from April to November last. This town, containing 6796 inhabitants, is situate on an island in Lough Erne at its narrowest part. The greater portion is elevated at least 100 feet above the water's edge, and in other respects its general plan and construction are conducive to a high state of the public health.

From Coleraine, we received replies from Dr. T. H. Babington, Physician to the Union Hospital; Dr. J. C. L. Carson; Dr. D. M'Kay; and Messrs. James Barr, A. Neile, and A. C. Clarke; all agreeing in stating the total immunity from the epidemic enjoyed by this town, which contains 5920 inhabitants, and is situate on the east bank of the Bann, three miles from the sea.

A similar report was received from Mr. Hamilton, Strabane (5097 inhabitants), which is situate on the river Morne, a tributary of the Foyle.

Dr. J. Gilbert, of Lurgan (4211 inhabitants), reported the existence of the epidemic, which assumed an asthenic type, and in some cases approached the malignancy of cholera. This town is within a short distance of Lough Neagh, upon a slightly elevated surface.

From Downpatrick (4098 inhabitants) Surgeon P. E. Brabazon, Medical Attendant of the County Gaol, Infirmary, and Fever Hospital, writes, that the result of his experience and that of his brethren of the outlying districts, whom he frequently met in consulation, is, that nothing that could be called an epidemic of dysentery prevailed there. During the three autumnal months there were only 4 hospital cases. This town is built on a group of little hills on the shore of Strangford Lough, at its southern extremity.

Replies, referring to the disease at Carrickfergus (3543 inhabitants), were received from Dr. J. M'Gowan, late Physician to the County Gaol; Dr. Stewart; and Dr. G. Forsythe, Surgeon to the Union Dispensary. It appears that there were numerous cases of diarrhœa and the English cholera in this locality, but of dysentery very few. This ancient city is situated on a gentle slope of the northern margin of Belfast Lough.

Dr. William Temple, Medical Attendant to the Union Workhouse and Dispensary at Monaghan (3484 inhabitants),

reports the non-appearance of the epidemic in his neighbourhood. With the exception of the Ulster Canal, which passes close by the town, this locality is far removed from any considerable stream, and the country about possesses rather a hilly character.

Mr. Malcomson, Surgeon to the Union Hospital, Banbridge (3801 inhabitants); Dr. R. M'Clelland; and Dr. N. Brownlow, forwarded replies, which show that this neighbourhood was entirely exempt. Dr. M'Clelland, indeed, states that epidemics of any kind are rare, and that when cholera was coasting all around in its last visitation, there was not a single case in this locality. A case mentioned by Dr. Brownlow he distinctly ascribed to specific contagion, originating in Belfast, where the patient had visited immediately prior to the attack. The town is situated upon a considerable declivity on the western bank of the Bann, and possesses great sanitary advantages.

From Cavan (3254 inhabitants) the reports of Dr. George Roe, Surgeon to the County Infirmary and Gaol; Dr. B. Coyne, Surgeon to the Town Dispensary; and Mr. O'Connor, show an immunity from the epidemic. Dr. Roe mentions, that he had not met with any unusual or increased number of cases of dysentery, or even of simple diarrhœa; but, on the contrary, he had fewer cases of the usual autumnal cholera or bowel complaints than he had observed in former years. The greater portion of this town is a dead level, only broken by a rivulet, which intersects it.

Dr. Alexander Bredon, of the Union Dispensary, and Surgeon P. M'Loughlin, have furnished replies in reference to Portadown (3091 inhabitants). There was but little of the disease in this neighbourhood, which lies nearly level on the banks of the Lower Bann.

Dr Charles Ferris, of the Union Hospital and Dispensary, and Mr. John Cunningham, of Larne (3076 inhabitants), report their attendance upon a considerable number of cases of dysentery in this locality. They resembled the epidemic of 1846–47, and were in general preceded or ushered in by diarrhœa. The town is situated on the flat shore of the Lough of the same name.

Dr. D. H. Charles, of Cookstown (2993 inhabitants), has forwarded replies to the printed queries; from which we may infer, though it is not expressly stated, that the disease was epidemic. This little town is situate near a small river, which cleaves the western shore of Lough Neagh, eight miles distant.

Very little dysentery was observed in the locality of Bangor (2850 inhabitants), according to the testimony of Dr. P. Russell, of the Union Dispensary, and Dr. W. Woods. The cases observed were mild, and yielded to simple treatment. The town is one of our most esteemed watering-places, and is situated on the south side of Belfast Lough.

Dr. W. H. Catherwood, Messrs. Thos. B. Getty, Dispensary, and S. Stewart, of Donaghadee, a seaport town on the north-eastern shore of the county Down, containing 2818 inhabitants, report as to the non-appearance of dysentery in this quarter. A very few cases of mild diarrhœa, which yielded to ordinary treatment, occurred in the practice of these gentlemen.

Ballymoney (2581 inhabitants), situated on an eminence three miles from the river Bann, according to the reports of Dr. William Moore, Surgeon to the Union Dispensary, and Dr. A. Thompson, of the Union Hospital, was not visited by any epidemic. A few mild cases of the disease occurred, which in general presented nothing peculiar.

The neighbourhood of Clones (2333 inhabitants) was also free from the disease, as reported by Dr. J. F. Hoskins, of the Union Hospital.

Mr. Alexander Bruce, and Mr. Thomas M'Comb, Surgeon to the Union Hospital of Antrim (2324 inhabitants), testify to the non-appearance of the epidemic in this town and neighbourhood.

The town of Portaferry (2074 inhabitants), situate on the south-eastern bank of Strangford Lough, furnished a very few cases to Dr. A. B. Filson, of the Union Dispensary there.

Mr. W. W. Thetford, Surgeon to the Strangford Dispensary, forwarded replies. His cases were generally mild, and not numerous. The town is situate west of the entrance to the Lough of the same name.

Dr. A. M'Dowel, Dr. J. M'Kee, Dispensary, and Mr. M'Donnald, all concur in giving a similar report as to the non-appearance of the epidemic in the neighbourhood of Randalstown. A few cases of a mild character readily yielded to ordinary treatment.

No decided cases of dysentery came under the notice of Dr. William Gordon, of Saintfield, Surgeon to the Union Dispensary there.

Mr. R. M'Dowel Barr, Surgeon to the Maghera Dispensary, met with a number of cases, and has furnished systematic replies.

Mr. C. J. Anderson, of the Kilkeel Dispensary, had not a single case.

Mr. Bryce Blair, of the Coagh Dispensary, noticed the epidemic, and has reported accordingly.

Dr. J. M'Mechan, of the Whitehouse Dispensary, states, that bowel complaints of the three species, namely, dysentery, diarrhœa, and English cholera, were prevalent in his district during the months of August, September, and October; the cases of dysentery did not, however, exceed 20 in number, and, generally speaking, were not of a formidable character.

No case presented itself to Mr. J. S. Dickson, of the Ballygomartin District, Belfast.

Dr. T. Playne, of the Dunmurry Dispensary, has furnished replies, and speaks of the disease as being epidemic in his district.

Dr. R. A. Little, of the County Donegal Infirmary, Lifford, and several of his brethren in this county, met with but few cases, which readily yielded to ordinary treatment.

Mr. F. E. Hall, Surgeon to the Toome Dispensary, had only 2 cases of the disease in his district, and 1 of these originated in Belfast.

Dr. Young, of Holywood, treated nearly 100 cases of the disease, which he observed under three forms,—the bilious, the acute or inflammatory, and the hemorrhagic. This village is a watering-place, within four miles of Belfast.

Mr. R. H. Gordon, of Castledawson, Surgeon to the Bellaghy Dispensary, has not met with epidemic dysentery in his circuit for the last two years.

Dr. George Croker, of the Hillsborough Dispensary, reports having observed cases which assumed the appearance of English cholera, in addition to the simple cases of diarrhœa and the ordinary dysentery.

At Grey Abbey, the epidemic, Mr. S. W. Shaw, Dispensary Attendant, writes, has been of a mild type, and presented nothing unusual, whilst the ordinary treatment was, with a single exception, uniformly successful.

The cases of dysentery were few at Dundonald, the simple diarrhœa of the season having been much more general. Dr. M'Minn and Mr. Quee reported on this district.

Mr. J. Leeper, Surgeon to the Keady Dispensary, had not a single case.

Dr. William Scott, of Aughnacloy Hospital and Dispensary, makes a similar report; as also Mr. J. Robinson, of the Ballybay, and Dr. E. Copeland, of the Lisbellaw, and Dr. W. Irwin, of the Castleblayney, Dispensaries.

Dr. Thomas Martin, Medical Attendant of the Blackwatertown Dispensary, reports that he treated about 200 cases of the epidemic in that neighbourhood; they were generally of the inflammatory type, frequently verging into the nervous form, but never so much as to cause change of treatment.

Dr. R. Crothers and Mr. P. King concur in asserting the non-appearance of the epidemic at Moy; but a few cases attended by the latter gentleman were chiefly of the sthenic form.

No replies were received from the districts of Ballyclare and Ballycastle, county Antrim; Dungannon, county Tyrone; Comber, county Down; and Lowtherstown, county Fermanagh; whence it may be presumed that these localities were exempt from the visitation.

From an analysis of the information now detailed, it would appear that in the county of Antrim, 8 out of 11 localities reported presented more or less of the epidemic; 4 out of 6 in the county of Derry; 2 out of 4 in Tyrone; 12 out of 14 in the county of Down; and 5 out of 6 in the county of Armagh. The north-eastern portion of Ulster, therefore, by far the most populous, and especially the neighbourhood of Belfast, seemed to have concentrated the forces of the malady.

We shall now consider the bearing of the replies furnished to the queries, which elicit the prevailing opinions of the practitioners of Ulster, upon the nature and treatment of this epidemic.

I. The first question on which information was requested refers to Etiology, and individual experience is made the basis of the answers. Upon this point we received replies from 40 practitioners: 30 of whom ascribed the appearance of the malady to variations in the weather, as, for example, the usual change of seasons, sudden vicissitudes, exposure to cold and humidity, a very high temperature, a long-continued drought, the influence of heat and moisture, or a high temperature immediately succeeding a period of cold and humidity. How far this element of the state of the weather entered into the causation in the instance of Belfast may be elicited by a contemplation of the following Table, extracted from the Meteorological Returns, regularly preserved at Queen's College.

Table II.

The Monthly Averages of the Readings of the Thermometer and Rain Gauge for the Year ending February, 1853, *at Belfast.*

Year.	Month.	Mean.	Max.	Min.	Rain.
					Inches.
1852.	March, ...	42°.2	47°.3	38°.5	1.100
„	April, ...	47.4	54.1	40.3	2.260
„	May, ...	52.4	59.1	46.0	1.714
„	June, ...	55.8	61.3	49.3	4.645
„	July, ...	62.2	70.1	55.8	2.391
„	August, ...	60.5	67.1	52.4	4.025
„	September, ...	53.8	59.1	47.1	1.044
„	October, ...	46.7	51.2	40.9	1.514
„	November, ...	42.4	47.9	37.6	6.010
„	December, ...	43.3	47.5	37.0	7.109
1853.	January, ...	35.2	43.8	33.5	5.103
„	February, ...	35.8	40.1	31.7	1.760

There is certainly a striking coincidence of the hot and comparatively dry weather of the month of September, and the maximum number of cases of the disease (*see* Table I.) June was the wettest month of all the eight preceding November. The following July had the highest temperature, and it is well known that a sequence of this character is eminently calculated to render the atmosphere in the highest degree impure, and this period exactly corresponds to the commencement of the epidemic in this locality. The existence of this influence may therefore be said to be undoubted, but its comparative power has not been estimated.

In twenty-five replies, the influence of change of diet, immoderate use of sub-acid fruits and fresh vegetables, adulterations of food, poor and innutritious aliments, excesses, the drinking of cold liquids when the body is heated, and bad water, are recognised as a principal cause. Looking at the matter in the abstract, this is a much more likely element in the causation of dysentery than changes in temperature or other atmospheric vicissitudes. The direct interference with the latter stages of the process of digestion, which anything of an irritating quality in the ingesta must produce, is readily appreciable as a powerful agent, and has always been considered by systematic authors as sufficiently effective. Dr. Carpenter[a]

[a] Human Physiology, Fourth Edition, 1853.

thinks it probable that many of "the bilious attacks which in this country are so frequent in early autumn, and which are commonly set down to the account of fruit (although the subjects of them have often abstained entirely from that article), are really the result of the presence of an excess of hydro-carbonaceous matter in the system, consequent upon over-feeding during the summer, and must be looked on as the natural means by which it is got rid of." A few practitioners refer to the retention of alvine excretions in the cells of the colon as a direct cause of irritation. Such cases were with difficulty distinguished in the first instance from the ordinary forms; and their true nature was only disclosed upon the appearance of scybalæ. In two reports an excessive use of potatoes is mentioned as a cause. This diet certainly acts injuriously on the intestinal tract, under two very different conditions: viz., when used early, and when in a partially diseased state. The influence of contaminated water, used as an article of food, in producing dysentery, has long been observed, more particularly by army surgeons. It is a cause, however, the action of which is not limited to any particular season.

Thirteen answers acknowledge the influence of some peculiar change in the atmosphere akin to Sydenham's "epidemic constitution" as a prevailing cause. It is, however, only a convenient form of expression, to indicate that we are ignorant of any definite, tangible influence; and especially when the propagation of an epidemic cannot be ascribed to contagion we know nothing of that peculiar atmospheric state which is supposed to originate the pure epidemics.—A more rational view of the mode of action of the atmospheric cause is taken by thirteen practitioners, who believe that the contamination of the air is due to sanitary influences. Dysentery and diarrhœa are acknowledged to be the forms of disease most frequently met with in localities distinguished by accumulations of decomposing animal and vegetable remains; and more especially is this the case during a season of drought immediately succeeding a period of wet. This we found to have occurred in Belfast, where sanitary causes of disease abound.—One answer alludes to the influence of gaol discipline, which certainly may act injuriously, either by the close confinement and deterioration of the air, or by insufficient variety of food.—Two practitioners are disposed to think the appellation of *endemic* a more suitable term, in the same way as we would refer to the yellow fever of New Orleans for an example; thus, in the in-

stance of Belfast, dysentery, according to the testimony of an old practitioner has prevailed less or more in the autumnal season during the last twenty-six years.

Intemperance is considered an element in causation in five replies. This corresponds to the well-known fact noticed during the Indian cholera visitations, when those addicted to alcoholic diet were invariably among the first seized. That this, however, on the late occasion, exercised but a very limited influence, may be shown from the circumstance, that of 35 reported cases of the dysentery epidemic, only 7 are stated to have been intemperate; and in 9 fatal cases, only two were of this class.

Purgative medicines are noticed as a cause in the practice of two physicians. Every practitioner of experience is aware that the inordinate use or consumption of this class of drugs is exceedingly prevalent, and even by the better classes of the community. And indeed the great sale of patent and proprietary medicines advertised for this purpose is quite sufficient to prove the fact: and as these are taken without the slightest discrimination, and under the most dissimilar circumstances, it is only surprising that the effect referred to is not more frequently produced.

The influence of contagion is only alluded to by two practitioners, which is strange, when we consider how nearly balanced are the authorities upon the subject. It is more than probable, however, that Dr. Harty's view of contagion is the correct interpretation of the differences on this topic. In the instances referred to in the replies, the patients, it was supposed, had received the infection in Belfast, and carried it with them to the country.

Judging from the combined experience elicited as to the causation of the late epidemic, it would appear that the prevailing influence was a combination of sanitary, dietetic, and meteorological agencies, culminating at a period of the year most conducive to the development of diseases of the digestive organs.

Our *second* query was intended to ascertain *the prevailing types or forms* of the epidemic. Thirty-nine practitioners furnished replies. The acute, inflammatory, and sthenic type was observed as principal by sixteen; the typhoid and asthenic forms by twelve; and the choleric by six. These were the chief. Other modifications were noticed only by a very few, viz., cases characterized by the presence of scybalæ, by a peculiar fatty discharge, resembling the evacuations in pancreatic

disease; by inordinate hemorrhage; by chronicity, with relapses; by the co-existence of specific fever; by uncontrollable gastric irritation; by gangrenous evacuations; by great prostration; by cerebral disturbance; and by dysuria and suppression of urine.

In some cases, eventually fatal, the pulse, till nearly the close, indicated nothing serious *per se*. In others, likewise fatal, the stools, under the influence of mercury, became bilious, and even apparently normal a few days before death. Again, it was observed that mercurialization did not prevent a fatal issue. Tenderness of the abdomen, which was noticed in most cases, especially along the colon tract, was quite absent in other cases, which eventually became severe. A number commenced exactly as an attack of English cholera, and eventuated in pure dysentery. Some cases yielded at once to large opiates; others defied a varied host of medicines, and yet recovered as if the disease wore out; others presented the identical symptoms of the Indian dysentery; and, in addition, there were very many cases in all the localities which suffered, to which the appellation of diarrhœa was alone applicable. In one of these the diarrhœa was associated with hepatic suppuration. A review of the recoveries shows that the most alarming symptoms yielded in a few days to appropriate treatment, while others, seemingly not nearly so severe, are to be found among the cases in the fatal list.

The forms of dysentery just mentioned are not to be taken as at all indicating the nature of the disease; they merely present us with a view of the principal combinations of symptoms which were met with in actual practice. The reply to the *third* query will impart this information.

"What *pathological results* would you infer from the post-mortem examinations which you instituted?" To this query very few answers were forwarded; the simple reason assigned being, that exceedingly rarely were such examinations permitted. The few replies given concur, however, in stating, that inflammation of the mucous membrane of the large intestines is always present to a greater or less extent, and exhibited in various degrees, from the most superficial follicular congestion to perforation of the bowels. The earliest stages will thus include what may be termed the "catarrhal form," characterized by altered, increased, tenacious, and coloured mucus. A higher degree will be distinguished by thickening and exudation of lymph, both in the submucous tissue and on the free surface of the mucous membrane, which might be termed a croupous variety. This lesion will be characterized by the severest tormina

and tenesmus, and by the supervention of typhoid symptoms. A still more advanced stage is represented by ulceration, either follicular or in scattered patches, with implication of the deeper layers of the bowel. Here confirmed typhoid symptoms arise, and the majority of the cases succumb, with frequent derangement of the urinary organs, and the supervention of cerebral symptoms. It is in this condition that the evacuations present a putrid appearance and a gangrenous odour, with hemorrhagic discharge. Though we do not possess confirmatory evidence, it is quite possible, judging from analogy, that there may be in addition a form of ataxic dysentery, characterized by ulceration or gangrene, occurring independently of true inflammation; in such circumstances the disease is an animal poison, and the blood is properly its seat, and must become the centre of our remedial means; but with this exception, and remembering that dysentery must not be confounded with diarrhœa or cholera, melæna or purpura, or rectal disease, the inflammatory condition is quite adequate to the interpretation of all the phases, types, forms, or modifications, detailed by symptomatologists."

The *fourth* query: "What *symptoms*, in the course of the disease, did you observe *prognostic of a fatal termination?*" received twenty-two replies, which may be conveniently arranged in divisions according to the different systems, or general state involved.—Thus the indications of danger, referrible to the condition of the nervous system, include delirium, stupor, total indifference, and profound oppression; refusal of nourishment, mental depression and anxiety; subsultus tendinum, extreme restlessness, and intense distress; dysphagia, hiccup, and involuntary evacuations.—The impression upon the circulation was indicated by the rising of the pulse, sometimes sudden, sometimes "creeping up," as it is termed, by becoming small and quick, and occasionally irregular, and characterized by a peculiar click, which one report notices as strikingly significant, and by a leaden or dusky hue of the skin.—The symptoms referrible to the digestive tract were, a red, glazed, or brown and dry chapped tongue, with sordes on the teeth, constant vomiting, tympany, and excessive tenderness of the abdomen, or a doughy sensation on palpation, fearful tormina, with persistent bloody evacuations, and shreds of lymph, the passing of dark-red fluid blood, at other times a gruel-like discharge; absence of bile and fæces, though the rule was by no means constant, a gangrenous odour of the evacuations—almost universal in the fatal cases; dark-coloured and scanty urine, with occasional suppression and retention, and a clammy, cold, or shrivelled loose

skin—frequently observed at the closing periods. The general appearance of the cases about to succumb presented the hippocratic countenance or the choleroid collapse, rapid emaciation, profound prostration, and a cadaveric exhalation.

It must be observed, however, that scarcely one of these symptoms, though indicative of a certain amount of danger, is necessarily the presage of a fatal issue. When, however, a number co-exist, more particularly those referring to the nervous system, the prognosis assumes a high degree of certainty.

We deemed it a matter of importance to endeavour to ascertain whether there were any positive *appearances in the alvine evacuations peculiar to the fatal cases.* The *fifth* query was issued with this view. Twenty-one replies were received, which, when analyzed, rather present us with negative results. The great majority consider the persistence of blood and mucus, with shreds in a state of semi-putridity, as the chief condition observed; this, however, is by no means peculiar to the fatal cases; while, besides, cases are referred to and reported in which the evacuations were bilious or fæcal, or presented no marked change. Among the modifications of the stools observed were—small quantities of straw-coloured serum; matters like tar; dark fluid, having a peculiar fleshy smell, with something like flakes of lymph floating; stools like meconium, mixed with blood, and particularly fetid; and thin, bloody putrid excretions passing away involuntarily. It sometimes happened that the evacuations, which at one time were characteristic, became some days before the close so very much improved as to lead the practitioner to hold out some hopes of recovery. Viewing the entire returns upon this point as a whole, we can only say, that the darkening and putridity of the evacuations are more to be depended upon than any other single variation as indicative of extreme danger, but that none is of sufficient semeiological importance to be implicitly relied upon.

The *sixth* query:—"Under what circumstances did you notice *suppression of urine?*" received thirty-one replies. Twenty of these affirmed its positive existence in cases observed; six mention frequent diminution; four notice retention, requiring the use of the catheter; eight practitioners never observed it in a single instance, while one[a] of the latter refers to a very aggravated case of dysentery in which an enormous quantity of urine was passed. Suppression was observed under very different circumstances, viz., in the case of a lady five days after

[a] Dr. Kelso, Lisburn.

her confinement; generally in cases attended with profuse perspiration; after long continuance of alvine discharges; sometimes throughout from the first or second day; in fatal cases; more or less in every case when the stools were thin and serous; in the sthenic, inflammatory cases, and when opium alone had been given freely; in cases marked by low fever, during the early stages only; about three or four days after the disease became established, and when the fever was at its height; very frequently in debilitated patients; and in one where the liver was enlarged. Retention was observed in one case at the outset, where inflammatory symptoms ran high; in others, frequently from irritation, and where it was suspected that the peritoneal covering of the bladder was inflamed.

Simple diminution of the secretion was noticed in all cases in the majority of replies.

The discrepancy observed in these answers respecting the existence of suppression of urine, may be probably explained if we suppose that a difference of meaning was attached to the term by those who respectively denied and affirmed its presence. It is very likely that the eight practitioners who asserted that they had never seen a single instance understood the expression, in its strictest acceptation, as representing a stoppage of the secretion, while the others considered that the term merely signified a certain degree of diminution in quantity, that is, of partial suppression.

The *seventh* query was intended to elicit information as to the *changes which the tongue presented* in the progress of the disease, and the *indications*, if any, which these afforded.

Twenty-eight replies were received. Eighteen of these notice the change from the usual febrile to the dry, brown, typhoid fur; several, the moist, loaded tongue, and the white centre, with the red edge, and the clean, glazed appearance. As to the indications, a broad expanded tongue was favourable; the red fiery tip and edge, and the dry, red, and unnaturally clean surface (the organ resembling a piece of red meat half-dried) indicated inflammation; a deeply-coated foul tongue was observed in the case of retained fæces; the white and flabby condition was noticed in asthenic cases, with serous diarrhœa; the early drying of the tongue almost to a certainty indicated a high degree of inflammation, while the gradual darkening of the surface, especially the dark brown crust at the root, and an onion-skin appearance, denoted extreme danger. The prevailing forms were, therefore, of three characters, viz., the usual febrile fur, the browning or darkening centre, and the red

tongue, either at the tip, with erect papillæ, or the edges, on the entire surface, all indicative of a series of grades of severity.

The *eighth* query was answered by thirty-six practitioners. This was intended to ascertain how far *the presence of bile* in the stools was *a favourable indication.* The general answer was, that it was always so; but seventeen replies included conditions: for example, by one it is considered unfavourable in excess; by another, in most cases desirable, but did not warrant the pronouncing a decidedly favourable prognosis; sometimes only, not always, as it has been observed in some fatal cases; or that cases which presented bile largely at first, were often attacked secondarily.

These limitations it is important to be aware of, though there can be no doubt of the accuracy of the general answer.

Cerebral symptoms have been occasionally noticed in severe cases of dysentery. The *ninth* query was intended to elicit information as to the frequency with which, and the circumstances under which they were observed. Of thirty-three replies, in only five is it stated that these symptoms were not observed; hence the great preponderance as to their frequent appearance, which, however, occurred under very various conditions. Thus, in a large number of observations, it was limited to the close. A few noticed them in the early stage, and in all acute cases when fever was high. Others, after a long continuance of the disease, or only when the alvine evacuations were frequent and copious; and others in typhoid and hemorrhagic cases, or when suppression of urine supervened; and a number attributed their occurrence to intemperate habits of the patients, to the excessive use of astringents, and more especially of opium.

Delirium appears to have been almost constant in the fatal cases; but though some reports deemed it premonitory of a rapidly fatal issue, it not unfrequently occurred in the recoveries, particularly in the acute forms. One practitioner observed the cerebral symptoms closely resembling those of apoplexy, while another noticed the tendency in the severer forms, but conceived it a symptom of no moment; while in a third reply it is mentioned as rare after the sixth day, whether the result was fatal or otherwise.

The mode of treatment, *and the principal remedies found most generally beneficial*, constituted the subject of the *tenth* query, to which we received forty-nine replies. Forty-six practitioners rely upon the use of opium,—for the most part,

however, in combination,—a very few, indeed, depending on its individual power. Thirty-four adopt some form of mercurial, thirty-two in combination with opium; and twenty-eight used some form of astringent. Twenty recommend the use of mild aperients; twenty-two the abstraction of blood; and fifteen speak highly of the administration of enemata and the employment of blisters. Of combinations of the different classes of remedies, the majority are in favour of opium with mercury; next, of opium with astringents; opium with occasional aperients; opium with diaphoretics; with blistering; mercurials with astringents, &c.; and in the case of a combination of three classes, the following is the order of supposed efficacy, viz.: opium, mercury, and astringents; opium, astringents, and diaphoretics; opium, mercury, and blistering; opium, mercury, and bleeding; opium, astringents, and blistering.

The general line of treatment which was adopted in the epidemic will be now easily understood; but it will be necessary to examine the replies to the remaining queries ere we can lay down more definite results.

The treatment characterized by more or less *abstraction of blood* consists of bleeding from the arm, leeching at various points of the abdomen, particularly over the region of the sigmoid flexure and in the neighbourhood of the anus. The general bleeding was associated with various other remedies: viz., mercury, opium, diaphoretics, astringents, and counter-irritation; with opiated mercurials to salivation, and blisters; with opiated mercurials and emollient enemata, and castor-oil, repeated at intervals until the bile appeared in the stools; with large doses of opium and large emollient injections; with opiated astringents, and the occasional use of washed sulphur as a purgative[a]; with opiated mercurials and opiate enemata.

The value of depletion as a remedy in the epidemic will be clearly manifest from the following fact:—It appears that the average number of days under treatment of twenty-five fully reported cases of recovery was thirteen; of these, four were bled largely, while the corresponding time was the small average of five days.

Emetics were recommended and used by two practitioners: in one instance[b], followed by mercurials and mild and shielded alkaline purgatives, repeated at intervals until a feculent discharge appeared; and in the other instance, followed by the daily administration of full doses of rhubarb with chalk.

[a] Dr. Starkey, Newry; Dr. T. Martin, Blackwatertown.

[b] Mr. Gelston, Belfast.

Blistering was frequently employed over some part of the abdominal wall by several practitioners in the treatment of this epidemic. Dr. Bryce Blair, of Moneymore, in very obstinate cases, with great confidence applied repeated blisters to the lower part of the spine, under the impression that there was some congestion of the spinal veins or membranes. Cantharides was the usual form employed; but in almost all cases a milder form of counter-irritation was premised,—such as sinapisms, hot-water stupes, and turpentine fomentations, stimulant embrocations, and hot cataplasms of linseed meal and bran.

The principal *diaphoretic* used was Dover's powder, which was given in combination with a mercurial, very rarely *per se*. By two practitioners, preparations of antimony were employed with the same view.

Mr. R. M'D. Barr, Maghera, administered, after a purgative, a combination of calomel, antimonial powder, ipecacuanha, and opium, every three hours until it produced decided perspiration, even should it require a period of several days; and Dr. M'Gee, Belfast, has used with success minute doses of the potassio-tartrate of antimony in combination with small quantities of the magnesian sulphate.

A mild farinaceous and astringent *diet* has been constantly enjoined. Dr. Brabazon, of Downpatrick, lays great stress upon the watching and changing of the aliment, which seems, he says, to be of more importance than any medicine. He is in the habit of varying the diet frequently from arrow-root, sago, rice, to boiled bread and milk (about the best of all), or beef-tea thickened by arrow-root; and when convalescence arrives, broiled mutton or chicken, with as little fluid as possible. The popular remedies, old cheese, or mutton-suet boiled in sweet milk, have been found useful in the practice of Dr. J. M'Gowan, Carrickfergus, as also a decoction of logwood.

In general, *stimulants* of the diffusible species were only used on the approach of collapse, or in the decline of the disease, or to meet some incidental phase of symptoms. For example: ammonia and peppermint were found useful in the painful abdominal distention which sometimes remained after the inflammatory symptoms had subsided[a], and opiates and the bitter tonics were occasionally given, in combination with camphor and alcoholic liquors, especially port wine. As a rule, however, stimulants were proscribed.

The *eleventh* query was intended to elicit opinions as to

[a] Mr. Wales, Belfast.

the use of *mercurial* preparations in this epidemic. Of forty-two replies, twenty-two were favourable under all circumstances, sixteen were only conditionally so; one expressed the belief that they were not required, and three were completely adverse to their employment. Of the twenty-two, only one decidedly recommended the use of mercury to produce salivation. The limitations were various: thus, one practitioner considered mercury only useful when the tongue was dry and brown, and the hepatic secretion prominently deranged; another found it most salutary in chronic cases; a third used none unless certain of organic disease; a fourth considered it highly beneficial in the early stages; a fifth when there was previous constipation; a sixth only used it when the tongue was furred and clammy and the abdomen doughy. On the other hand, the terms used by the unconditional advocates of its use are extremely encouraging, thus:—"We possess no means so safe and efficacious when judiciously given;"—"Without the command of mercury we should not like to undertake the treatment of an important case;"—"The mainstay;"—"Mercury is the means of cure beyond a doubt;—"invaluable;"—"indispensable," &c. The utility of mercury is, therefore, fully established. Shielded by opium, and used as the only treatment, the average number of days under treatment, in recoveries, was six, which is the shortest period recorded as pertaining to any other treatment except depletion. But mercury to salivation tells a very different tale; for of all the modes of treatment employed in the 26 cases of recovery it was the slowest, while 4 of the 10 fatal cases died under the influence of this remedy. Of forty-one returns, thirty give a decided preference to the gray powder as the *form* employed; twenty recommend calomel, and eighteen the blue pill, and a few used mercurial inunction. The gray powder was most usually given with Dover's powder, and the other forms with the solid opium. Heroic doses were occasionally administered, but, in general, small quantities, frequently repeated, were employed.

A number of practitioners placed the greatest reliance upon what may be termed the *opiate* treatment. Thus, one practitioner designates opium as the *sheet-anchor*, but in practice combined it with the mineral and vegetable astringents, another uses about two grains every three or four hours, and frequently with opiate suppositories and enemata[a]; a third gave three to

[a] Dr. Kelso.

four grains every six or eight hours[a]; and a fourth states, that no medicine seems to produce the slightest amendment in which some preparation of opium did not exist[b]. Some invariably commenced with a full opiate, and afterwards various remedies; a very few seemed to depend on it alone: only one practitioner considered opium injurious in all cases except the chronic; and if else admissible, gave it with a gentle purgative.

Seventeen practitioners report highly of the great utility of *acetate of lead* with opium; twelve others, however, express a want of faith; and two deem it injurious.

This difference of opinion may be readily explained by reflecting that it is more than probable that the remedy has been used by different practitioners under very different states of the intestinal lesion. For example, in the early stage of the inflammatory cases, it cannot be otherwise than injurious; also, in cases marked by retention of the excretions: whereas, when employed in the hemorrhagic forms, or when inflammatory action has been reduced, we may find it, with Dr. W. Moore, Ballymoney, the best astringent we have. With some practitioners the main object would appear to be to arrest the alvine discharge as speedily as possible, apparently without regard to the very natural and rational indication for the removal or counteraction of the irritation which causes the discharge. This observation must suggest itself to any one who has observed the frequent attempts to swell the list of astringents in the treatment of dysentery: their very multitude argues their comparative inefficiency. The following opinions indicate a healthy re-action:—"It is deceptive to attempt the case by the use of astringents;"—"Employs them only in tedious cases;"—"No faith in lead or astringents as such;"—"Has not found astringents useful except in last stage;"—"Lead disappointed;"—"Astringents useless;"—"No confidence in lead;"—"Has not found lead and other astringents to answer expectations;"—"Lead of little use, and apt to produce nausea and vomiting;"—"Has not met with a case requiring astringents, which in the early stage are deadly;"—"Useful only in chronic cases."

In corroboration of the above, we may mention that the average time under the astringent treatment was sixteen days, or about three times longer than that with the mercurials and depletives; while the fatal cases under astringents died in about one-third a shorter time.

[a] Dr. Morrison, Newry. [b] Dr. Campbell, Lisburn.

Opiate enemata and suppositories have been found, scarcely without exception, highly useful in allaying rectal irritation, and the dysuria which is so frequently attendant upon severe tenesmus. There is, however, considerable difference of opinion as to the efficacy of the other forms used, such as injections of lead and opium, of silver and opium. Dr. W. Moore has found the latter (in the proportion of three grains to the ounce) useful in cases of some duration, particularly when the evacuations were tenacious. Mr. Hanna and Dr. Blair are of the same opinion. The former have been used with success by Dr. Gilbert, Lurgan, and Mr. J. Leslie, Armagh.

The sulphate of copper has been used in the advanced stages by Mr. Hall, of Moneyglass, and Dr. R. Little, Lifford, with some success; while iron, in the form of the muriated tincture, is recommended by Dr. D. Jamieson, Newtownards, and Dr. M'Gowan, Carrickfergus.

The *fourteenth* query refers to the *sulphate of magnesia and laudanum treatment.* This, though generally supposed a novel practice in dysentery, is really not so, but was employed at least thirty years ago. It had, however, fallen into comparative disuse until revived by Dr. T. H. Purdon, Belfast, who strongly recommended it some years since in the pages of the Medical Press. It consists in the administration of minute doses of Epsom salts, with a few drops of laudanum in peppermint water.

An analysis of thirty-five replies shows that by only twelve practitioners was the practice considered in any degree successful, and of these only three are its advocates; eight express a total want of faith in its efficacy; and twelve had no experience of its administration. By two practitioners who usually employed it, it did not answer their expectations in this epidemic.

Among those who used it there seems to have been little data for precise indication. One practitioner has found it invariably ineffectual; another observes that, while in one case it cured the patient, in a second it increased the sickness, tormina, and tenesmus. On the other hand, one advocate used it largely and successfully; another has witnessed the most satisfactory results; a third speaks of it as an excellent remedy. Then, as to the real therapeutic agent in the combination, a difference of opinion exists; one believing that it acts only as an opiate; another, as a mild aperient; while a third refers its virtues to the sulphuric acid. On the whole, it seems to be a mode of treatment of very limited application, adapted most probably to the bilious and catarrhal forms, certainly not at all

appropriate for the acute, inflammatory, or severer types. Dilute sulphuric acid has of late years had a run of success in diarrhœa; and in one of the reports on this epidemic it is highly spoken of when used in combination with carminatives, and strongly recommended as an adjuvant on account of its antiseptic, astringent, anti-hemorrhagic qualities.

The use of *purgatives* in intestinal disorders, though recommended by almost all practitioners, is so beset with indications for limitation, that it was considered an important point to ascertain under what circumstances aperients were used in this epidemic. Of thirty-eight reports received, in only seven were they employed repeatedly and regularly throughout the progress of the disease; in eighteen their use was limited to a certain stage; in one, in cases of children only, in nineteen, according to supposed indications as they occurred; and in three their administration was entirely proscribed. Thus thirteen practitioners recommended them invariably in the early stage, three in convalescence, and two in the chronic forms; eight ordered them when scybalæ were suspected, or when the abdomen felt full and hard; seven in severe tenesmus with loaded tongue: others, after using astringents, or in previous constipation. The most usual aperient employed was castor-oil, shielded by tincture of opium. Dr. Blair used it in combination with turpentine at the very outset. Dr. M'Mechan often found a combination of calomel (2½ grs.), magnesia (5 grs.), and rhubarb (15 grs.) answer extremely well. The compound tincture of rhubarb with castor-oil was also a favourite form; and indeed, as a rule, whatever might be the aperient employed, it was almost always combined with some species of sedative.

An *alkaline treatment*, such as was advocated by Mr. Kelly, Mullingar, some years ago[a], is strongly recommended by Dr. Martin, Blackwatertown, who treated about 200 cases. The plan which he ultimately adopted consisted simply in emetics of ipecacuanha in the first instance, followed by daily full doses of rhubarb with chalk; the latter to the extent of two drachms *per diem;* and in his hands it was eminently successful. After the first stage, or in chronic cases, in which flatulence was usually a distressing symptom, he substituted the compound chalk powder for the simple powder; during convalescence he administered bitters with an alkali; calomel he occasionally used in obstinate cases to increase the purgative properties of the remedies employed.

[a] See our Fifth Volume, N. S., p. 268.

The special reports we received on the epidemic shall next be given.

I. By Dr. T. H. Purdon, Belfast:

"As far as I know, the plan of salts and laudanum treatment was original, or a combination of ideas, which I even now remember. It is in fact a modification of different modes of treatment which I found suit the terrible epidemic we had some years ago (1846–7). Not wishing at the time to 'rush into print,' no mention was made of it until I had tried it fairly at the County Gaol, where it was first used. All the cases yielded to it that year. I need scarcely say, from my observation of epidemics, I did not expect it to succeed so well another time; neither has it on the whole proved so uniformly successful, notwithstanding it still turns out the most generally useful plan there. We are scarcely ever without some cases, and this last year I have found that by blistering over the sigmoid flexure along with salines and attention to diet *immediately* a man complains, he soon gets quite well. No astringents I have tried at the Gaol appear to be of almost the slightest service. I have used them *freely*. We have had no cases, I may say, for a month; but ever since the epidemic I believe I have only noticed two or three times that we were free. In several cases *I* am satisfied it was excited by contagion. What would it have been had the patients not been separated? The formula is: Ten grains of sulphate of magnesia, five drops of laudanum, and a table-spoonful of peppermint water three times in the day. This I found especially useful when there was a large quantity of blood evacuated, also in 'ochreous stools.'"

II. By Dr. Thomas Thompson, R. N., Consulting Physician, General Hospital, Belfast:—

"When I arrived in Belfast from the West Indies, in the beginning of August, 1826, I found dysentery prevailing to a much greater extent, and in a more malignant form, than I had ever seen in this or any other country, and it returned equally malignantly and extensively in the autumn of 1827.

"The particular season of the year indicates the cause, especially among the working classes, viz., green and fresh fruits and vegetables, &c., &c.,—so commonly known that it is useless to say more on this head; but I think a very high range of temperature during the autumn in this locality would add greatly to the spread and malignancy of the disease.

"The summers and autumns of 1826 and 1827 were extremely hot. When I arrived in London in July, 1826, the thermometer stood six degrees higher than at Jamaica, when I left it, two months prior to that date, and several of our sailors dropped down dead from *coup de soleil* in Plymouth dockyard, when at work, on our arrival there. To this cause, therefore, I attributed its prevalence in Belfast at that time.

"In the treatment of dysentery I have been in the habit of prescribing the following medicines, not only on this recent occasion, but I may say during the last thirty years, viz.: opium, ipecacuan, calomel, mercury with chalk, and Dover's powder, sometimes separately, at other times in combination; the chalk mixture, too, with tincture of catechu and tincture of opium, and occasional doses of castor-oil, with or without laudanum, as symptoms indicated the advantage of using one or both. Of course, many other remedies, too numerous to be named, have been in use, but those above mentioned are the principal."

III. By Mr. Wales, Belfast. Mr. Wales, who has been in general practice since 1848, attended 28 cases of the epidemic (of which one alone was fatal); in all the others recovery was slow. His plan of treatment has been, and still is, first to empty the bowels effectually by either castor-oil or calomel, with the addition sometimes of large injections of tepid linseed tea; this is followed by calomel and Dover's powder. Having produced the mercurial effect, he sustains it slightly throughout the disease; and if there are then no inflammatory symptoms, he begins with astringents. Where the evacuations are profuse and bloody, he uses acetate of lead and opium; when the blood does not predominate, he prefers a combination of kino, alum, and opium. Of the entire class of astringent medicines and their combinations, he prefers the above-named. He says:—

"When the least abdominal tenderness prevails I am rather afraid of astringents, except opium and acetate of lead, neither of which, in my opinion, will do harm under any circumstances. In all cases I give occasional aperients, such as castor-oil and rhubarb, or, when oil is objectionable, as it generally is in bilious habits, I substitute calomel. I may further state, that I almost invariably blister the abdomen at the commencement of the disease, and afterwards apply warm moist bran. I have found this very serviceable in relieving pain, especially that experienced in micturition: barm injections afford much relief when the rectum is greatly irritated. As regards opium, I think it is almost indispensable, but I am inclined to look on it principally as a palliative remedy. In my mind, mercury is the means of cure beyond a doubt. As for Epsom salts and laudanum, I have found the combination useful, but I have tried the laudanum separately and found it as effective. I have seen severe head symptoms produced by opium, in consequence of which I have lately substituted hyoscyamus on the least approach of cerebral disturbance."

IV. By Mr. Gelston, Belfast:—

"The character of the attack in this epidemic was varied: in the young, and adults of a healthy constitution, it was usually sud-

den in its formation, and the accompanying fever inflammatory; in the older or debilitated habits the typhoid type prevailed. In one situation, near a brick-field, the affection appeared to be contagious. An elderly woman became ill and died: the room was whitewashed, and another family entered upon occupation; the father was soon after attacked, and two individuals in the same house but in another apartment, and soon after a father and child next door.

"The causes appeared to me to be the use of bad water, a potato diet, and low, damp, and filthy localities. My treatment consisted in the administration of mild emetics; large doses of mercurials: to an adult—calomel, ten grains, and gray powder, half a drachm, or singly, one drachm, and Dover's powder, six grains; followed by rhubarb, half a drachm, Rochelle salts, two drachms, and repeated until the bowels became free and the stools feculent. Sometimes a draught of castor-oil, rhubarb tincture, and laudanum, was substituted for the latter. Whenever the bile appeared in the evacuations, the case generally progressed to a favourable termination. Astringents were seldom required; and of these, bark and rhubarb tinctures, slightly opiated, sufficed. In low typhoid cases, mercurials in smaller doses, with ipecacuan frequently repeated, saline drinks, Mindererus' and ammonia spirit, were my principal remedies; but in addition I found turpentine stupes, and small opiate enemata, of much value. On the whole, I consider the purgative mode most efficacious when preceded by a full dose of mercury; and of purgatives I conceive rhubarb, with some saline aperient, to be more especially beneficial. In protracted cases I have used with advantage tannin with a decoction of logwood."

V. By Dr. M'Gowan, Carrickfergus:—

"My experience of dysentery leads me to consider that opium is the sheet anchor in the treatment, and of this I gave one grain, and in several cases one grain and a half, with kino, three grains, or opium with gallic acid, or with acetate of lead, two grains, every three hours until the bowels became restrained; at the same time a table-spoonful of chalk mixture, with catechu and opium tinctures, about an hour and a half after each pill. When tenesmus continued, after the motions had been restrained, I ordered opiate enemata, and when these were not retained, a suppository of four or five grains of opium; with these I ordered some popular remedies, as old cheese or mutton suet boiled in milk, or a decoction of logwood in milk. In obstinate cases I have tried, on failure of other remedies, the tincture of the muriate of iron. A favourite medicine with me was Dover's powder, given so as to excite diaphoresis. Mercurials, such as the blue pill and calomel with opium, I have also tried. I recollect asking the late Drs. M'Donnell and Thompson, of Belfast, as to their experience of dysentery, and they both agreed that opium was the medicine most deserving of reliance."

VI. By Dr. M'Mechan, of Whitehouse Dispensary:—

"As to etiology, I shall only mention the coincidence, that during the months of August, September, and October, when the epidemic prevailed here, an unusually small quantity of rain fell.

"With regard to treatment (Qu. 10), I have found mild aperient and anodyne remedies generally beneficial. (Qus. 11 and 12.)—I have often found mercurial preparations useful. I sometimes give calomel in a ten-grain dose, with two grains of opium, with speedy and satisfactory result: in more chronic cases, I give repeated small doses of calomel or mercury, with chalk combined with opium, with much advantage.

"(13). I have experienced the best effects from full doses of opium—say two grains every six hours—in recent acute cases, and have even repeated the dose more frequently in urgent circumstances. I am not so fond of astringents, but often employ them with good effect in tedious cases. I look upon opiate enemata as almost indispensable for the relief of tenesmus. I feel bound to speak gratefully of the effects of dilute sulphuric acid combined with carminatives, and strongly recommend it as an adjuvant worthy of confidence on account of its antiseptic as well as its mild astringent and anti-hemorrhagic qualities.

"(14). I have also witnessed very satisfactory results from the use of sulphate of magnesia with laudanum, as first brought under my notice by Dr. Purdon.

"(15). I would give a purgative either very early in an attack of dysentery, or in a later stage, when I had good reason to suspect that scybalæ existed, were causing irritation, and might thereby be probably expelled. For this particular purpose I have often found a combination of calomel, magnesia, and rhubarb, to answer extremely well; and every one has in such circumstances witnessed the good effects of castor-oil with laudanum."

VII. By Mr. J. Cunningham, of Larne:

"So far as my experience of the prevailing epidemic is concerned, I have found the administration of two grains of calomel and one of opium, repeated at intervals of three hours, when required, invariably successful. In ordinary cases I have been able to arrest the further progress of symptoms by a mixture of absorbents and antacids, with two or three drops of laudanum to each dose, given after every liquid motion. Conjointly with these remedies I have applied flannels wrung out of very hot water, and liberally sprinkled with turpentine, over the abdomen."

VIII. By Mr. Ferris, of Larne Dispensary:—

"Although we have had a number of cases of dysentery of late in this neighbourhood, I am not quite satisfied that they can be attributed to epidemic influences; for the most part they are traceable to errors in diet. The cases resembled the epidemic of 1846–7. In-

deed, those that have come under my notice (and they have occurred frequently at intervals since) have been very much of that character, and were very generally preceded by diarrhœa. I have only to add, that my experience of calomel in the treatment of dysentery (and I have tried it extensively, in large doses and small, in combination with opium, and *per se*) has led me to abandon it as injurious. With acetate of lead I have been equally disappointed, except in a few cases that were seen early."

IX. By Dr. Young, of Holywood Dispensary:—

"Out of nearly a hundred cases treated by me within the present year, I have seen quite sufficient to justify me in arranging them in three classes, namely, the bilious, the acute or inflammatory, and the hemorrhagic dysentery. I recognise the first by the absence of abdominal tenderness, though considerable pain, like that of colic, is present; by the bilious nature of the stools, though these are also gelatinous, scanty, tenacious, and frequently repeated; and by the uneasiness complained of being chiefly confined to the epigastric region. I have invariably succeeded in curing this form by blue pill and opium, given according to the urgency of the symptoms, accompanied by an astringent mixture of rhatany, catechu, and laudanum. —I recognise the second form by deep-seated tenderness in the hypogastric region, by intense agony and straining at stool, by the small red jelly-like mass so frequently voided, and by the firm, full, and quick pulse. It is here that I have great faith in the mercurial plan as recommended by Dr. Mayne, of Dublin, and in this variety I carry out his instructions to the letter, but in addition, accompanying each dose of calomel and Dover's powder by the astringent mixture mentioned above; leeching of the anus affords surprising relief, and a bran poultice over the whole abdomen is a very comfortable application.

"The third form is easily recognised by the immense quantities of pure blood that are passed, which very soon bring on most alarming symptoms, that unless speedily checked, will end fatally. I regard this as the worst form. I have not seen many of these cases, but from what I have seen, I attach great importance to what might be called the sulphuric acid treatment. But as I also give either quina or bebeerina, and acetate of lead and opium at the same time, I will not ascribe the success attending this method entirely to the sulphuric acid. In some of these cases I have used pills of quina and opium with great success, and in one case lately I tried gallic acid in five-grain doses every three hours, and the patient recovered. Perhaps in this variety it would be worth a trial. I found the alkalies uncertain; and I have seldom done much good with astringent injections. I have not much faith in blistering in bad cases, and think diet of a supporting nature may be given earlier than what is generally supposed. I have now only glanced at the leading points of this troublesome epidemic, and having mentioned what I consider

the diagnostic symptoms of the chief varieties, with the treatment adapted for each, have only to express my great pleasure at the thought that the present investigation will most likely prove a valuable addition to our knowledge.

"N. B.—I may here mention three symptoms, vomiting, pain, and bloody stools, which I have found present more or less in the three classes of dysentery: vomiting most frequent in the first class; pain most severe in the second class; and bloody stools most marked in the third. I have made no allusion to typhoid dysentery, because typhoid symptoms will arise sooner or later in all the varieties, if the disease goes on unchecked, though, as might be expected, they will be found more frequently in the third variety."

X. By Dr. P. Russell, Bangor:—

"The cases we have had in this district were few, presented a mild form, and were unattended with fatal results as far as I am aware. The treatment most generally useful in my hands was the simple one of tincture of rhubarb and laudanum, once or twice a day, in moderate doses, and I have not found any other remedy so generally satisfactory. I never prescribe calomel, but the hydrargyrum cum cretâ, with Dover's powder, I use a good deal. In the summer of 1851 we had a very bad form of dysentery here, and I allude to it for the purpose of bringing forward some remedies which I found extremely beneficial, and which I believe are not generally used,—I allude to enemata of nitrate of silver and laudanum, one drachm of the former in eight or ten ounces of distilled water, with fifteen drops of laudanum once or twice a day. In some malignant cases, where other means failed, I found these followed by immediate amelioration; tenesmus much relieved; motions much less frequent, and their character changed; and the pulse and countenance improved. In one case only did I find the means referred to not followed by much benefit. In some of those cases in which the tongue, mouth, and fauces were covered with aphthæ, I used the biborate of soda in ten-grain doses, with five-drop doses of laudanum. Blistering the epigastrium, and the abdomen generally, was also useful, as well as bringing the system under the influence of the gray powder in combination with Dover's powder."

XI. By Dr. Playne, Dunmurry Dispensary:—

"I cannot but think that atmospheric influences brought about the epidemic dysentery of the current season in this district, admitting, of course, that damp, filthy houses, bad ventilation, unwholesome food, &c., did their usual share of the work. My reasons for looking on the cause as atmospheric are,—the condition in life of the persons attacked, and the fact that at the time the disease made its appearance (about the beginning of autumn), we had extraordinary vicissitudes from heat to cold, keen night-frosts sometimes following days of intense sultry heat.

"The first case that came under my notice was that of a watchman, a person of robust health, regular habits, and enjoying all domestic comforts suitable to a man in his rank of life. Here, as in the majority of cases that followed, there was no insufficient clothing, inferior food, broken-down constitution, or exposure to mephitic vapours; to all of which we are accustomed to look for causes in *town* epidemics.

"As regards treatment, when great prostration existed, and that was the stage in which I found nearly all my cases, I gave opium, quina, and camphor, together with mercurials and astringents, at the same time applying counter-irritants. My opinion is strongly in favour of mercurial preparations. Without the command of them, I should not like to undertake the treatment of an important case; and likewise, without opium, I fear we should have up-hill work. I do not know what could be substituted for it. Of lead I cannot report favourably; and as for enemata, every attempt I made to have them administered proved unavailing. I had recourse to aperients when there was painful and continued tenesmus, not preceded by satisfactory evacuations; and also when the morbid discharges ceased very suddenly, the other symptoms persisting."

XII. By Dr. Gilbert, Lurgan:—

"In this locality the epidemic appears to be caused for the most part by cold and wet, location in damp or filthy houses, and the use of innutritious food and drink. The disease has been of an asthenic type, and in some cases approached to a malignant character, tending to serious organic lesions, and distinguished in the fatal cases by high fever, much hemorrhage, delirium, vomiting, and the dry tongue. The treatment I have employed with most success in several hundred cases consisted in *strict* attention to *diet and drink*, and the use of the following medicines in different combinations, according to the peculiarities of the particular case:—Opium, *Dover's powder*, *acetate of lead*, *hydrargyrum cum cretâ*, rhubarb, *calumba*, cinnamon; enemata; and turpentine externally, &c. Laudanum and sulphate of magnesia I consider of use in some cases, but not to be depended on nearly so much as the above means. Purgatives I never use, and rarely mild laxatives or enemata. In fact, the great object in the treatment appears to be, as in cholera, to arrest the disease as *speedily* as possible, and to guard against a relapse, not by homœopathic treatment, but by prompt, energetic measures."

XIII. By Dr. J. Cuming, Armagh:—

"I have seen very little dysentery here: of the five cases which fell under my observation two terminated fatally; and though there was not a post-mortem examination in either, I have reason to believe that there was inflammation and ulceration of the large intestines in both.

"One of the patients was in his eighty-fourth year, and in this

case the disease was of about five weeks' duration. The other case, that of an adult, terminated fatally in about a fortnight.

"The remedies I have found most serviceable in the treatment are opiates, both by the mouth and anus; warm emollient poultices to the abdomen, and occasionally leeches about the anus. I have not given mercury so as to affect the system in the late epidemic, but contented myself with such doses of hydrargyrum cum cretâ, guarded by Dover's powder, as might promote the action of the liver without irritating the mucous membrane of the intestines. When an aperient seemed necessary I used castor-oil, guarded by tincture of opium; but this I seldom had recourse to.

"The disease sometimes set in with much gastric irritability and vomiting, and for this symptom I prescribed a solution of bicarbonate of soda with tincture of opium with good effect, and sometimes I applied a blister to the epigastrium. The diet I found to answer best was flour, bread, or rice boiled in milk. Though we have had more or less of diarrhœa in the Lunatic Asylum during the autumn, I did not meet with a decided case of dysentery. Upon the whole, I should think that this locality has suffered much less from the epidemic dysentery, in proportion to its population, than Belfast."

XIV. By Dr. R. A. Little, Lifford:—

"Altogether I have not had more than half a dozen cases under my care, either in the infirmary or in private, and they yielded to the ordinary treatment, viz., leeches and blisters over the sigmoid flexure of the colon; mercury and opium by the mouth; and acetate of lead and opium enemata; with decoction of logwood for drink, &c.

"With respect to mercury, I am a strong advocate for its administration; and the form in which I have found it most useful is that of hydrargyrum cum cretâ, with the dried carbonate of soda, and opium; or blue pill, with ipecacuan and opium; and after the gums became affected I found half-grain doses of sulphate of copper and opium of decided benefit: but to relieve the urgent pain and irritation of the tenesmus, enemata of acetate of lead and laudanum were decidedly of the greatest service."

XV. Mr. F. E. Hall, Moneyglass:—

"The cause of the present epidemic dysentery in Belfast I believe to be the following, viz., malaria from sanitary causes,—emanations arising from the egesta or excreta.

"My course of treatment in this disease has been, in the first place, to bleed either generally or locally, according to the strength of the patient,—that is, if called in at an early stage. Secondly, I apply either the mustard sinapism, or hot fomentations of turpentine, over the whole abdomen; then I administer six grains of calomel and a grain and a half of opium in pill at night, and follow it with

an ounce of castor-oil next morning; and continue the above night and morning until the black bile appears copiously in the stools; not merely the dark scybalæ, but the free motion of bile, with the whole contents of the intestines. I thus not only subdue inflammation by bleeding and counter-irritants, but I empty the bowels thoroughly, either by the above means, or throw up enemata—say three or four pints of tepid water,—or, if at hand, the infusion of linseed, with a large proportion of tincture of opium, or some other emollient clyster. During each evacuation I order the feet and legs to be kept particularly warm, and if the strength be failing, I allow a glass of port wine to be given every two or three hours.

"The above are the outlines of the plan of treatment I have adopted in any cases of *acute* dysentery which came under my care, and I can assure you the result has been satisfactory.

"In the chronic form, if I find inflammation still exists, I employ leeches, fomentations, and blisters, and keep the bowels open; but in that state where bloody and mucous stools still continue, with frequent desire and tenesmus, I give astringents combined with opium; and by far the best is the sulphate of copper—say a quarter of a grain to three grains—combined with opium (in pill), but I never give it on an empty stomach, and if it should produce irritation I add from one to four drops of hydrocyanic acid. By a steady perseverance in the above plan, and keeping the bowels firmly rolled with flannel, supporting the strength, and avoiding ingesta, I have generally been successful. If tenesmus should still continue, I apply leeches to the anus, and throw up injections. Before death takes place in any case, I consider ulceration always occurs."

An analysis of the returns of 36 cases illustrative of the epidemic presents us with the following particulars:—

Of *recoveries*, there were 19 males and 7 females, their ages varying from seventeen to sixty-seven, the average forty-three; 13 took ill in the midst of good health, the other half were delicate for some time previously. Their occupations were very various, scarcely two of exactly the same calling, but 18 were of active habits, and 13 mostly engaged out of doors; 21 were deemed temperate. In 6 cases the cause ascribed was error of diet and cold respectively, 2 were traced to contagion, and the others could give no sufficient account of the origin of their illness; 2 only received medical treatment before being seen by the reporter; 7 had taken some domestic medicines; and 17 none. The time ill before being seen by the reporter varied from two hours to eight days, the average four days nearly, and the entire duration of treatment by the reporter fluctuated between one day and seven weeks, the average being thirteen

days, but the great majority of cases recovered within this period.

The average time under different forms of treatment varied as follows:—

Cases in which bleeding was employed recovered in five days; under mercury and opium chiefly (short of salivation), in six days; under mercury, opium, and astringents combined, in twelve days; under opium and astringents alone, in sixteen days; and in cases ptyalised by mercury, in twenty-two days.

Of *deaths*, there were 5 males and 5 females: ages varied from twenty-four to sixty-five, the average forty-eight; 7 were in good health at the period of the attack; 2 delicate; and in 1 case not mentioned; 3 only were engaged in out-door employments, but 7 were of active and temperate habits. Before being seen by the reporter, the duration of the attack varied from twelve hours to fourteen days, the average four days and a half; 2 had received some medical treatment; 5, domestic remedies; and 3, none. The average duration under the treatment of the reporter was twelve days, and fluctuated from four to twenty-five days, the extremes; and as for the effects of the treatment employed, we can only ascertain that, under the opiate and astringent plan, the fatal issue occurred within five days, while under the mercurial and depleting systems life seemed to have been prolonged to the period of ten and twelve days respectively.

Having now expended our materials, and having in the course of the report indicated the principal points which seem to have been elicited therefrom, it merely remains to append a few practical remarks which are clearly deducible from a general survey, or which are likely to be suggested to an attentive reader of the evidence now furnished.

It appears, that while a considerable variety of forms obtained in this epidemic, the prevailing was decidedly the inflammatory. This is, we think, deducible not merely from the opinions of the reporters, but also from the comparatively superior efficacy of the antiphlogistic plan of treatment: hence the value of early discrimination of this form. It is quite true that the opium system, or a few doses of opium with mercury, or even a completely expectant mode of management, had its quota of recoveries. Such facts show that dysentery may be merely catarrhal, or the result of purely accidental irritation; but in a given case, should this plan fail, there cannot be a doubt that we should be prepared for meeting with prompti-

tude a serious and extensive inflammatory lesion,—always, of course, excepting those rare adynamic forms dependent chiefly upon the agency of an animal poison. Now the nice point is, how are we to discriminate the presence of this inflammatory form sufficiently early? In many cases, no doubt, there will be little difficulty—the pyrexia being marked, and the local symptoms prominent. But it is not always so: treacherous cases are not infrequent, which deceive even the most experienced. It is important, then, to have some resource to which we may have recourse in such a perplexity; and, fortunately, we may rely in a great measure upon the effects of remedies. If these be inefficient in cases seemingly of the mild forms, or give not satisfactory results within a very short period, let us at once look upon the case as one tending to present the higher grades of the inflammatory process, and act accordingly. Of course, while suggesting this counsel, we do not for a moment wish it to be understood that the antiphlogistic treatment is to be at once adopted in its entirety and purity,—such would be irrational,—but merely that it is to form the guiding idea in our management, permitting of such modifications as the particular circumstances of individual cases will always indicate. Besides this therapeutic test, we have every reason to believe that a closer examination of the patient than what is usually adopted may furnish sufficient data for early diagnosis of the existence of inflammation, more especially the examination of the abdomen by *palpation*, the changing of the tongue just at the lip and edges, the creeping up and alteration of force in the pulse, the temperature, the state of the urine, and the appearance and persistence of tenacious and coloured discharge (like pneumonic sputa). The fact is apparent, that practitioners are frequently thrown off their guard, especially in the first days of treatment, by various circumstances which tend to influence action. Thus, a series of successful cases under (say) the sulphate of magnesia and laudanum plan, the apparently good effects of opium or an astringent medicine, the slight constitutional disturbance which sometimes ushers in the most serious cases, the deceptive feelings of the patient, have each and all a paralyzing effect, induce delay, and we lose the most precious time for applying the measures which will really and effectually battle with the disease. Again, we are all too prone to become enamoured of a specific when we think we have found one, and then our great care is to apply *the* remedy in the proper *time* or proper *dose*, forgetting, it would seem, that in some case or another we must be certain to omit and overlook the more important matters of the local

lesion or the constitutional state. Nothing can be more irrational and unphilosophic than to permit the mere rumour of a remedy to supplant all other, nay even vital, considerations.

In closing this report, we have to return our most grateful acknowledgments to those gentlemen throughout Ulster to whom we are indebted for the data supplied, and especially to those who took the additional trouble of writing out *resumés* of their experience[a]. We were gratified to notice the favourable manner in which most of the reporters, as well as others who from want of opportunity were unable to give assistance, viewed the institution of this inquiry. We trust that in future a similar spirit may actuate our provincial brethren in the other provinces, and induce them to co-operate in epidemiological researches whenever opportunity occurs. Too frequently such efforts have been left for individual enterprise; but let us all remember that union, even of the individually weak, is strength, and do all we can to encourage that sacred spirit of brotherhood, whether it be required for the maintenance of our common temporal interests, or the promotion of our common science.

[a] It may be mentioned, as not elsewhere noticed, that replies to the printed queries were also furnished by the following Belfast practitioners, viz.:—Mr. J. Aickin, Mr. James Armstrong, Dr. J. W. Black, Dr. C. S. Black, Mr. S. Browne, R.N., Dr. Dill, Dr. Halliday, Mr. Hanna, Mr. Harkin, Dr. Hunter, Dr. Lynch, Dr. Malcolm, Dr. Wm. M'Gee, Dr. J. S. Mulholland, Dr. Pirrie, Mr. John Quin (since deceased), Dr. Ross, Mr. J. Smyth, and Mr. Warwick.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

Histoire des Polypes du Larynx. Par G. H. Ehrmann, D. M., Professeur à la Faculté de Médecine, &c. Strasbourgh: Berger-Levrault. 1850. Folio, pp. 36. Avec six Planches Lithographiées.

We are usually in the habit of associating together the idea of the greater or less interest of a disease with its rarity or frequency of occurrence,—a natural result from the desire implanted in the mind of man to seek after the unknown rather than the known; yet it is usually impressed by the teacher on the student that he should rather acquire a knowledge of the diseases which are most common, as being those he is most likely to meet with in the daily routine of practice, than of such as from their infrequency he may never see examples of. This is truly the utilitarian view of our art, and therefore probably the more correct one to be taken; nevertheless we are not to despise the labours of those who investigate and endeavour to discover the nature and correct treatment of such affections as are obscure and their history incomplete, from not being commonly witnessed.

Of the many diseases of the respiratory organs there is perhaps not one the diagnosis of which is so doubtful as of polypus of the larynx; the rarity of its occurrence, and the difficulty of its treatment, moreover, invest its investigation with peculiar interest; and therefore we think that a concise notice or abstract of the beautifully illustrated volume the title of which is given above, cannot fail to prove acceptable to our readers.

Dr. Ehrmann was induced to study this subject so long ago as the year 1837, when a case of the disease was witnessed by him, and for the treatment of which he, in consultation, proposed the operation of laryngotomy; his proposal was not

agreed to, and the case terminated fatally, with symptoms of suffocation. On post-mortem examination a polypus growth was found attached to the inferior ligament of the larynx, and completely blocking up its orifice. The author's son, struck with the singularity of this case, chose the disease for the subject of his inaugural dissertation, and from a report of all the analogous cases which had been published drew the conclusion that polypus of the larynx, if left to the resources of nature, must inevitably prove the cause of sudden death at an earlier or later period, and that even the operation of laryngotomy, although often proposed, had not hitherto proved successful when practised. This inaugural dissertation was published in 1842. In 1844, Professor Ehrmann met with the following case, in which he operated successfully:—A woman, aged 33, in whom the existence of a laryngeal tumour had been previously diagnosed, was suddenly seized with symptoms of impending suffocation, and the most prompt means were employed to avert threatened death. With this view he opened the trachea, so as to afford the patient a means of respiration, and afterwards, extending the incision into the larynx, he removed the foreign body which had been developed therein; the operation was followed by the complete recovery of the patient.

The author's success in this case was his chief inducement to undertake an inquiry into the history of the disease, and to collect together, as he has done in the present volume, a report of all the observations hitherto published upon it. Amongst them, however, he includes some examples of purely syphilitic vegetations in the interior of the larynx, in doing which we think he is in error, as they differ from true polypus of the larynx in their symptoms, and in having a special origin; and notwithstanding the opinion of the late Mr. Carmichael, published in the second volume of our former series and referred to by the author, also in being curable in the majority of cases without the intervention of a surgical operation. He has collected notices altogether of thirty-one cases which occurred in man, and to these he has appended a detail of five cases in the lower animals—two in horses and three in cows. We shall, however, notice those cases only which occurred in man, and appear to us to be examples of true polypus of the larynx. Warty growths, of which he includes some examples, occur therein, it is true, without the presence of syphilitic taint of the system,—being met with in children between the ages of 5 and 12. Nevertheless, as they do not admit of cure by surgical interference, they cannot be correctly classed with the true polypus, which being removed by operation, the patient

may recover completely. We shall notice the cases in regular order.

Cases 1 and 2 are taken from Lieutaud's works; neither seems to have been an example of true polypus, and no complete account or history of them is given. In one the person was aged 30, and the symptoms during life were of an *asthmatic* character; in the other, a boy aged 12, who was of a *phthisical* habit, death occurred suddenly.

Cases 3, 4, and 5, are from the surgical writings of Desault, as published by Bichat. The first was discovered in a dead body in the dissecting room; the second occurred in a patient of Desault, *who died suddenly of suffocation, after having been repeatedly threatened with it;* and the third was narrated to that surgeon by a medical man of experience. In all these the polypus was pyriform in shape, and inserted by a pedicle into one of the ventricles of the larynx. The symptoms during life agreed also, consisting in a sensation of obstruction in the windpipe, respiration easy at times, difficult at other periods, and occasional accesses of impending suffocation occurring suddenly during expiration, and disappearing often in the act of inspiration.

The sixth example is reported by Pelletan[a]. It occurred in a man aged between 30 and 40, who had consulted him but once for extreme emaciation and long-persisting salivation, consequent on the inconsiderate use of mercury. He died suddenly in a fit of suffocation a few days afterwards, and his friends told Pelletan that he previously had *several attacks of threatened suffocation.* On dissection, a *solid tumour* of the size of a small nut was found growing from the neighbourhood of the glottis, being attached by a thin pedicle, which allowed it sufficiently free motion to get within the rima glottidis, and thus give rise to the suffocative attacks, and eventually cause death.

The seventh case was communicated to the author by M. Schultz. It was that of a boy aged 6, who, in February, 1823, was attacked with croup, which at once assumed a chronic character, and was attended with loss of voice. On the 12th of July, twenty weeks after the symptoms first appeared, he died suddenly in a fit of suffocation. On examination, a fleshy, pediculated, movable tumour, of the size of a haricot bean, was found situated near the base of the epiglottis, and completely blocking up the opening of the glottis.

The eighth example is taken from the description of Otto.

[a] Clinique Chirurgicale, tom. i. p. 15.

The tumour, which was lobulated, is preserved in the Museum at Breslau: portions of it had been spat up during life. The symptoms were, hoarseness, slight cough, and dyspnœa, the difficulty of respiration eventually becoming so severe that the abdominal muscles, from the violent contraction to which they were subjected during respiration, became excessively painful; the patient gradually grew weaker, and died at length *slowly suffocated.* On dissection, the larynx was found to be completely ossified, and a large, fleshy, lobulated tumour blocked up the glottis; it sprung by slender, rounded pedicles, of a fibrous structure, from the inferior ligament of the glottis on each side.

The ninth and tenth cases are quoted from Andral's Clinical Medicine, but their history is very incomplete. One occurred in a phthisical patient, who complained for some time of a sensation of obstruction and constriction in the region of the larynx; a soft, pediculated, reddish tumour, resembling a uterine polypus, diminished to about a third the space between the *chordæ vocales.* The other was also found in a phthisical individual: the symptoms are not given. The tumour was only of the size of a pea, and resembled the syphilitic vegetations which occur at the orifice of the rectum. This case is evidently not an example of polypus.

The eleventh observation is described by M. Senn, of Geneva, from whom it is quoted, as a *syphilitic* tumour of the larynx,—hard, fibrous, warty, pediculated, of the size of a filbert. The man died suddenly; and on dissection, œdema of the glottis was discovered, and this tumour springing from the right ventricle, and *hanging* in the passage, so that a very small crow-quill could with difficulty be inserted into the larynx.

The twelfth case, as the seventh, was communicated to the author by M. Schultz, of Deux-Ponts. It occurred in an unmarried female, 44 years of age, and the symptoms were simply those of some obstruction to free respiration. She died rather suddenly, her disease not having been diagnosed; and the autopsy disclosed the existence of a movable, fleshy tumour, springing from the base of the epiglottis, and extending to the commencement of the trachea, blocking up the laryngeal tube so completely that the passage of air through it seemed to be altogether prevented.

The thirteenth example occurred in the practice of M. Albers, of Bonn, and is extracted from a report by M. Urner, of Elberfeld. A carpenter, aged 54, had suffered for several years from cough, hoarseness of voice, and dyspnœa, with pains in the thoracic and clavicular regions, but none in the larynx.

Eventually, copious expectoration, amounting to a pint and a half in the day, of a very fetid, yellowish, diffluent matter, took place,—the feet swelled, the breathing became difficult, and constant fits of convulsive cough, with dyspnœa, occurred. In one of these attacks he expired, as it were strangulated. No correct diagnosis had been made. Post-mortem examination revealed the existence of a rounded, fleshy tumour, of the size of a small nut, situated between the inferior ligaments of the larynx, and attached by prolongations to the two inferior *chordæ vocales.*

The fourteenth case was recorded by Dupuytren[a]. An old man was admitted into the Hôtel Dieu for some disease of the urinary passage. He had suffered for a long time from attacks of difficulty of breathing, which were ascribed to suffocative asthma, or to spasm of the glottis. He died suddenly in the hospital during one of these attacks. The examination after death showed that a *true polypus*, which sprung from one of the lateral ligaments, had completely blocked up the glottis; it was more than eighteen lines in length, and was bifurcated at its free extremity.

The fifteenth case reported was one of *warty tumours* in the larynx, which occurred in the practice of Dr. Brauers, of Louvain. He performed the operation of laryngotomy, and then discovered the cause of the difficulty in respiration which had previously existed. He first applied the acid nitrate of mercury directly to the growths, and afterwards the actual cautery, but they increased, notwithstanding, so rapidly as to block up the external incision and to necessitate its enlargement. The patient was then attacked with hectic fever, which it was believed proved fatal, but the result was not accurately described.

The sixteenth is an example of *vegetations* in the larynx, reported by Mr. Rayer in his work on Diseases of the Skin.

The seventeenth case occurred in the practice of Dawosky, of Celle (Hanover). It was not a true polypus, consisting, as described, in the growth from the larynx of vegetations resembling a bunch of grapes. Dr. Ehrmann appends to this case a notice of the existence of one precisely similar in the Hunterian Museum in London, numbered 1059.

The eighteenth example given is from the treatise of MM. Trousseau and Belloc on Laryngeal Phthisis. It occurred in a man aged 42. The symptoms lasted for a year and a half, and consisted in attacks of obstructed respiration, amounting at times almost to suffocation, both inspiration and expiration

[a] Leçons Orales, tom. iii. p. 602.

being equally difficult. Laryngotomy was performed to relieve the symptoms, which became most urgent, but the patient survived the operation for six days only. Post-mortem examination revealed general œdematous tumefaction of the larynx, and the existence of a *lardaceous* tumour springing from its left ventricle, and passing into the laryngeal tube, in which it assumed the colour and consistence of a mucous polypus.

The nineteenth example, cited by the author, was a case reported by M. Gérardin to the Academy of Medicine. The symptoms consisted in sudden loss of voice occurring two years previously to death, and persisting; about a fortnight before the fatal termination, symptoms of suffocation set in, and eventually proved fatal. Post-mortem examination revealed the existence of a tumour of the size of a hazel-nut in the larynx; it was whitish, uneven on the surface, from one to two lines in length, and sprang by a short pedicle from the right sinus, which it filled completely. There was no ulceration or redness of the laryngeal mucous membrane.

The twentieth case is cited from Mr. Ryland's treatise on Diseases of the Larynx[a], by whom it was quoted from Mayo's Pathology. The preparation is preserved in the Museum of King's College, London, and consists of "a firm, whitish, elastic polypus, which grew by a pedicle from the root of the epiglottis in an elderly lady. It had produced occasional suffocative seizures, in one of which the patient died."

The twenty-first case, also cited from Ryland, possesses no interest, as the history of it is unknown, except that the patient died of phthisis. The preparation is in the King's College Museum. Drawings of both are given by Ryland, and copied by our author, from which they seem to have been examples of true polypi.

The twenty-second example occurred in the author's practice, and first drew his attention to the subject. The original account of it, as we have already noticed, was published by his son in his inaugural dissertation. The case was that of a boy, nine years old, who, about half a year before his death, was attacked with some hoarseness and occasional obstructive respiration, but not sufficient to alarm his parents. On the 9th of September the symptoms first became alarming; on the 11th the author diagnosed the existence of a foreign growth in the larynx, and proposed the operation of laryngotomy, which was not acceded to, and the boy died on the next day. Examination of the larynx after death disclosed in it a fleshy, lobulated

[a] London: Longman, 1837, pp. 228.

excrescence, of the size of a nut, springing, by means of a pedicle, from the left inferior ligament of the larynx.

The twenty-third case is copied from an inaugural dissertation by Rendtorff, published at Heidelberg, in 1840. It is that of a young man aged 19. He complained for only a short time before his death, which took place suddenly, of uneasy sensations in the neighbourhood of the larynx, with a constant and copious secretion of mucus in the throat, but he had no loss of voice, or symptoms of suffocation. A dense, fleshy polypus, of a pale-red colour, and of the size of a filbert, was found on post-mortem examination to spring from the aryteno-epiglottidean ligament, and passing into the larynx, to narrow its caliber in the upper part.

The twenty-fourth, twenty-fifth, and twenty-sixth cases are from Gluge. The first occurred in a man, aged 50, who had suffered for only a short time from dyspnœa, and did not keep his bed until a few days before his death. His voice, however, had been low and whispering for a long period. He died suffocated, his disease not having been previously recognised. Dissection showed the existence of a hard, fibrous polypus, as large as a pigeon's egg, in the larynx, extending from the left arytenoid region to the third ring of the trachea. The second was discovered in a dead body, and is described as an *excrescence* of the mucous membrane. It should not, therefore, we think, be classed with true polypi. The same may be said of Gluge's third case, which consisted in a general tumefaction of the parietes, with a tumour which, springing from the mucous membrane of the larynx, projected towards the surface so as to be recognised during life as a morbid growth. It happened in a woman, aged 40, who for many years had suffered from difficulty of breathing and loss of voice. She died suddenly, a short time after the operation of laryngotomy had been performed.

Of the twenty-seventh case no history during life is given. It occurred in the practice of Dr. Nasse, of Bonn, and the preparation is thus described by Albers in his Pathological Atlas: "The internal surface of the larynx of an adult, who for many years had been affected with hoarseness; a pulpy, soft tumour is growing from the commencement of the left inferior ligament of the glottis; no trace of fibrous tissue could be discovered in it; there is some deformity of the openings of the glottis."

The twenty-eighth case given by M. Ehrmann we notice directly from the 32nd volume of the London Medical Ga-

zette[a], in which it was published by Mr. Stallard, of Leicester. A woman, aged 40, died suddenly after a violent paroxysm of coughing. She had been but four days in hospital, and on admission "she stated that for a long time past she had been asthmatical, and had a very bad cough. On examination after death, there was found in the trachea a loose body of a polypoid nature, about the size of an almond, and having a pedicle about three-quarters of an inch long, and about half an inch below the cricoid cartilage; at the anterior part were the remains of the pedicle of the polypus."

The twenty-ninth is the case referred to in the commencement of this notice, in which Dr. Ehrmann diagnosed the disease and operated successfully. It occurred in a married woman, aged 33, of a sound constitution, and always in the enjoyment of good health. In the autumn of 1840 her voice was at first noticed to become hoarse, and finally to be lost. This change was not attended with pain, or any difficulty in attempting to speak or during respiration. In 1844, the patient herself perceived that she could imitate the sound of the opening and shutting of a valve (*bruit de soupape*), by a sudden effort of inspiration and expiration. At times, during her meals, drops of liquid entered readily into the larynx and excited violent fits of coughing, during which she occasionally expectorated small particles of a structure resembling the tumour, afterwards removed by the operation. In March, 1844, she was seized for the first time with an attack of extreme difficulty of breathing, evidently arising from some mechanical obstruction to the free entrance and exit of air existing in the throat. Dr. Ehrmann now saw the case, when, finding that the polypus had become fixed in the rima of the glottis, and that immediate death from suffocation threatened, he performed the operation of tracheotomy, cutting through the cricoid cartilage and the first two rings of the trachea. So much immediate relief was thus afforded that he thought it better to delay for the present incising the larynx to seek for the tumour. In forty-eight hours, the presence of the canula in the trachea having excited constant fatiguing cough, he did not delay any longer. He then made an incision along the line of junction of the two wings of the thyroid cartilage, cutting downwards to meet the opening previously made into the cricoid cartilage, and in which the canula was retained during the operation, and upwards towards the os hyoides. The cavity of the larynx being then

[a] Page 275.

sponged, so as to free it from blood, the polypus excresence became visible, situated along the left inferior ligament of the glottis; it was seized with a forceps, and excised by means of an armed bistoury. The growth was in three pieces, and of a *cauliflower* aspect, having fleshy granulations here and there on the surface. On the twenty-first day air no longer passed through the wound, and she breathed easily by the natural passage; in short, she recovered in all respects, with the single exception of the aphonia persisting; but unfortunately, in six months afterwards, she was carried off in an attack of typhoid fever. Examination of the larynx after death proved it to be perfectly healthy, the part from which the tumour was excised being still visible. Sections of the growth, when placed under the microscope, showed its consistence to be analogous to that of the laryngeal mucous membrane, but the epithelial cellules were more abundant than usual.

The thirtieth case is an example of wartlike vegetation in the larynx of a child four years and a half old. Death was attended with symptoms of *slow* asphyxia.

The thirty-first case occurred in the Military Hospital of Strasbourgh, the patient being an officer aged 60. For about two years he had suffered from attacks of difficult respiration and aphonia. On his admission on the 15th October, 1846, he was in a state of asphyxia, and consequently tracheotomy was at once performed. He did not recover completely, although he lived for three months afterwards. On examination after death, a *fusiform*, pediculated polypus was found in the larynx, lying in the length of its caliber, and of nearly an inch long.

To the foregoing cases of polypus of the larynx occurring in man, as reported by Dr. Ehrmann, we shall append the following well-marked example, published by Dr. Parker in the New York Journal of Medicine for January, 1852:—"J. D., aged 60, a weaver, a native of England, married, of good habits and healthy parentage, had a severe attack of inflammation of the lungs fifteen years since, which it was thought he could not survive: he, however, at length recovered, and pursued his trade until six years ago, when he came to America. In this country he was engaged in an establishment where most of his time he was enveloped in steam: while in this situation he contracted a severe cold accompanied by a hoarseness, which continued gradually increasing in severity up to the time of his death. Succeeding this, he began to suffer a difficulty of respiration, and often, when the weather was cold and damp, the dyspnœa would be so great as to threaten immediate suffocation. For a time his general health continued good, but as

the disease advanced deglutition began to be attended with much uneasiness about the larynx, amounting often to threatened suffocation, and finally prevented him from swallowing anything but soft or semi-fluid food. He now began to emaciate. On the day of his death he was able to walk about his room, but he remarked to his wife that he could not live long. He died suddenly, as if with œdema glottidis. *Autopsy, sixteen hours after death.*—Both lungs free from adhesions, but distended with air, owing to the great degree of emphysema which existed; no tubercles were discovered; the trachea and larynx were removed, and, upon laying them open, the *causa mortis* was revealed, viz., a polypus attached by a pedicle to the right superior chorda vocalis; the body being of the size of a chestnut, and occupying the rima glottidis. The polypus was of the kind called mucous polypus."

Three other cases have been collected by Dr. Parker from the American journals, but they do not appear to us to have been examples of what may be called *true* polypi[a].

We shall now proceed to analyze Dr. Ehrmann's commentary on the cases of this rare disease which he has collected together in the highly interesting volume before us, and an abstract of which we have given in the foregoing pages.

No matter how the tumours may have differed in anatomical composition or in their exact seat, they appear to have all given rise to a nearly analogous set of *symptoms*, varying, however, more or less in intensity, from simple alteration of the voice to complete asphyxia. Aphonia was the most constant symptom, and usually was the first present; cough was only occasional, and had nothing peculiarly characteristic; it was in some instances croupal: the feeling of a foreign body in the larynx, when it occurred,—which it never did until the case was far advanced,—was the most pathognomonic of all; it was present during attempts at expectoration, or when solid food was being swallowed. Dypsnœa was a very constant symptom: it either commenced insensibly and increased slowly, or appeared suddenly, accompanied by a painful sensation of suffocation, which recurred in fits, varying, however, in their nature and character, being in some cases so severe as to require the operation of tracheotomy to be performed without delay.

[a] In our Selections from Foreign Journals (Part III. of our present Number) will be found an interesting example of polypus of the larynx, the report of which may be regarded as supplementary to our notice of Dr. Ehrmann's work. Singularly enough, it also occurred in the practice of a Strasbourgh physician.

The only *true pathognomonic sign* of the existence of a polypus in the larynx, according to the author, is the expulsion of portions of the morbid growth, as occurred in two of the reported cases; but even this alone we cannot regard to be so, as such expectoration could with difficulty, if at all, be diagnosed from that of the so-called bronchial polypi:—taken in connexion with other symptoms and signs, its import is certainly most important.

The stethoscope does not appear to have been used much, or to have afforded useful diagnostic assistance when it was employed, and yet we think it ought to prove most serviceable in a doubtful case,—and all these cases are doubtful. In a man, aged 24, under our care while we write, and in whom we believe a polypus to exist in the larynx, there is comparative absence of laryngeal murmur just below the cricoid cartilage at the left side; but Dr. Ehrmann conjectures that a hissing or whizzing sound (*une espèce de sifflement*), should be heard. The *bruit de soupape* constituted, as may be remembered, a highly characteristic phenomenon in one of the cases narrated.

The progress, with reference to rapidity, or the period at which a laryngeal polypus may prove fatal, is, it is evident, most uncertain.

As regards the *pathological anatomy and histology* of these tumours, Dr. Ehrmann remarks:—

"The form and structure are variable; they are sometimes roundish, sometimes irregularly shaped, united in clusters, granular, lobulated, most frequently pediculated; occasionally resembling condylomata in appearance. Their attachments, whether broad or slender, single or multiple, are rarely travelled by blood-vessels of any size. They may occupy the entire internal surface of the larynx, but they are attached more usually about the glottis, particularly to its inferior ligaments. The epiglottis is the usual seat of those vegetations, which are supposed to be syphilitic. The growth is constituted in some cases of fibrous or fibro-cellular tissue, and in others of all the elements of the mucous membrane united, but modified in character. When the tumour belongs to the first class, it exists in the form of a firm and compact mass, resembling that which constitutes fibrous tumours properly so called; in this respect the tissue composing this species may be compared to that of the ligaments of the glottis, or of their neighbouring parts; we also see the pedicles of these tumours to consist in fibrous prolongations, by which they are inserted into the fibrous network of the *chordæ vocales*. The tissue of these tumours is traversed by extremely minute blood-vessels, and their external covering is composed of altered mucous membrane. The polypus in the twenty-second case was of this nature. The second variety of laryngeal polypus consists

chiefly of tissue similar to that of the mucous membrane; of this form Case 29 afforded a good example." From the microscopic examination of it, it would appear probable "that hypertrophy of the mucous membrane involves especially its epithelial layer, for it is this which is found accumulated in the mass forming this species of polypus, the cellular substance which occurs in it belongs, as we know, to the basic tissue of all mucous membranes, and if some fibro-plastic elements occupy occasionally the base of these vegetations, it establishes, as it were, a sort of transition between the mucous polypi properly so called and the fibrous polypi."

The author concludes his anatomical description of these growths in the following words:—

"M. Lebert, who has specially studied the tumours of the mucous membranes, is of opinion that in no case should the term polypus be applied to them, but that they should be called *excrescences* or *hypertrophies*, and distinguishes them into three forms:—1st. *Epithelial hypertrophy;* 2nd. *Circumscribed hypertrophy* of the entire thickness of the mucous membrane; and 3rd. *Hypertrophy* of a portion of the submucous areolar tissue only. These three forms correspond, as we see, to the principal elements of the *mucous system*, and there exist between them different degrees of transition. Although M. Lebert does not mention polypi of the larynx, a disease which he appears to have had no opportunity of observing, the description he gives of mucous tumours is perfectly applicable to those of the air-tube."

In fine, as regards treatment, Dr. Ehrmann correctly states, as the deduction to be drawn from the cases he has collected, that the only true method of cure consists in the ablation of the polypus growths by means of laryngotomy; and his own case certainly proves the operation to be not only effectual but safe. It is, however, we conceive, most important that the operation should be performed at as early a period of the disease as possible; and if we consider the slight danger attendant on opening the trachea, we hold that, in doubtful cases, where the symptoms tend to indicate the existence of a morbid growth in the larynx, it would be not only justifiable, but judicious practice, to perform the operation of tracheotomy even as an exploratory measure.

We have given the foregoing rather full analysis of Dr. Ehrmann's book as being one of the most interesting monographs which, perhaps, it has ever fallen to our lot to review. It reflects the greatest credit on the author's industry, research, and judgment; while the result of his own case, to use the words of Stromeyer, when an account of it was read before the Scientific Congress at Aix-la-Chapelle, in 1847, "constitutes one of the most brilliant conquests of modern surgery."

Der Typhus in Irland, beobachtet im Sommer, 1852. Von DR. JOSEPH LINDWURM, früherem Assistenzarzte der med. Kliniken zu Heidelberg und Würzburg. Erlangen, 1853. Verlag von Ferdinand Enke. 8vo, pp. 99.

Typhus Fever in Ireland, as observed in the Summer of 1852. By DR. JOSEPH LINDWURM, formerly Assistant Physician to the Medical Clinique in Heidelberg and Würzburg.

THIS work, the result chiefly of a two months' stay in the Irish metropolis, will strike even those who may not wholly coincide in the writer's views as being the production of an anxious and diligent searcher after truth. It is dedicated "in token of the author's gratitude, to the Professors and Physicians of the Dublin Hospitals, who through their liberality assisted in his undertaking; and in particular to Professor Dr. William Stokes." The object of Dr. Lindwurm's investigations, as well as the opinions he has formed from a careful examination of disease, will be best explained by giving, as nearly as may be in his own words, a brief abstract of his prefatory remarks.

Two visits of some duration to Ireland and Scotland have confirmed the author in agreeing with the view put forward by Drs. Graves and Stokes, that in typhus the organic lesion is to be considered as secondary to the general disease; and in dissenting from the opposite opinion which originated with the older French School, that the fever is only the consequence of a local affection. In the year 1851, in company with his friend Dr. Rullmann of Wiesbaden, he passed four months in Edinburgh, Glasgow, Dublin, and London; and in the former city,

"We saw," he says, "for the first time a great number of cases of typhus, some of which not only ran a like course and presented like symptoms with our ileo-typhus, but gave the same results on dissection; while others exhibited similar symptoms and went through a similar course, being generally attended with a diffused roseolar or measles-like eruption, but, on the other hand, showed no constant changes in the dead body.

"Convinced of the similarity of the symptoms and course, and of the different results of the post-mortem examinations of the two classes of cases, we sought both in the copious English literature, and from all the physicians and clinical teachers with whom we were acquainted, an explanation of the nature of these fevers. But on no group of disease, perhaps, does so great a difference of opinion exist as prevails in reference to fever. While some assume but *one* fever, and regard all species, as measles, scarlatina, typhus, typhoid fever, &c., as only modifications of one and the same morbid

process, others look upon each individual form of typhus as an independent specifically different disease, with independent contagion."

Having given a remarkable instance of this difference of opinion, the author informs us that in the summer of last year he returned to England, in order by accurate observation at the bedside, and by as many post-mortem examinations as possible, to study for himself the nature of typhus, and, if practicable, to ascertain whether the typhus of Britain differs from the Continental; whether the simple or exanthematous can be distinguished during life from the ileo-typhus; and whether there really exist two specifically different morbid processes, as distinct, for example, as measles and small-pox. Further, he took the greatest interest in the question of contagion, since almost all English physicians and writers set down its existence as incontestible, while there is so little to adduce in support of the contagiousness of the typhus of his own country:—

"I chose," he says, "Dublin as my place of observation: from the experience of my former journey I knew that typhus always prevails there, and that I was certain of obtaining every assistance in my undertaking from the physicians of that city. In no respect was I deceived in my expectations. During two months that I remained in Dublin, I had at my service for observation a very large number of cases of typhus. In the Hardwicke Fever Hospital, which I visited daily, there were treated during the month of August, 1852, 160 cases of fever, and 35 of small-pox and measles; in the Meath Hospital, which I likewise visited daily, I saw about 20 cases of typhus; and in Cork-street Fever Hospital there were on an average during my attendance from 100 to 120 fever patients in the house."

The author considers that two-thirds of the cases in the fever hospitals were typhus; and he suggests accurate statistical reports on typhus as a desideratum, stating that he found all hitherto published reports incomplete and unsatisfactory, the most different diseases being thrown together under the designation of "fever." He declines for himself to attempt any statistical statement either in general or in special reference to the hospitals he visited; his proposed task being, by means of a certain number of accurately reported cases, to sketch as faithful as possible a picture of typhus as he observed it in Dublin, appending reports of the autopsies he had the opportunity of making, and concluding with a short statement of a few interesting cases, which presented something remarkable in their course.

In the treatise which follows the foregoing, and which may

be considered as the second part of his work, Dr. Lindwurm gives a detailed description of the disease with reference to the existing English literature on the subject. The two principal points he has had in view in its composition are, the question of contagion, and the identity or non-identity of the several forms of typhus. For the sake of completeness he adds a short examination of the so-called relapsing fever.

The following paragraph exhibits so much kindly feeling towards the profession in Dublin that we shall but render justice to the author by translating it; in so doing we must, however, dissent from some of his observations as regards our pathological investigations:

"I esteem it to be an especial duty to take this opportunity of expressing my warmest thanks for the cordial and hospitable reception I experienced in Dublin. I was assisted in the most friendly manner in my labours by all the physicians of that city; every institution was at all times at my service; and the dissections at the Hardwicke Fever Hospital were with the greatest readiness intrusted to me during my stay. As concerns the latter, I should desire, solely through interest in the medical school of Dublin, to express a wish that a change might be adopted which would prevent such abundant materials being turned to so little account as they at present are. Each principal physician leaves it to his assistants to perform the post-mortem examinations as they think fit; when they please (and this is unfortunately not always the case), interesting preparations are put up in well-arranged museums. But so long as all the dissections are not made and demonstrated by a professor specially appointed for the purpose, the study of pathological anatomy can make no decided progress in Dublin, and must continue to be, as hitherto, limited to an abundant collection of interesting preparations."

It must have been through inadvertence alone that the author could have been led to form so unfavourable an opinion of the state of the study of pathological anatomy in Dublin. In no place, we believe, are more pains taken with this particular branch than in the Irish metropolis, as the Proceedings of the Dublin Pathological Society, the first of its kind established, which are regularly published in this Journal, will amply testify. The dissections in the several hospitals are, in almost every instance, made under the immediate superintendence of the attending physicians and surgeons; and it is only surprising how many of these gentlemen, extensively engaged in private practice, have been able to devote so much time as they have done to this subject. Of every preparation and drawing in the valuable and extensive Museum of Surgical and

Medical Pathology attached to the Richmond Hospital, a full and accurate history is on record. It must, however, be remembered, that Dr. Lindwurm's visit was made during the recess; had it taken place during the medical session, and had he attended the weekly meetings of the Pathological Society, his statement would have been far different.

To this we may add, that the distinguishing characteristic of the Irish School of Medicine is, that while original observations in pathological anatomy have been multiplied to so great an extent, and by numerous investigators, their relation to practical medicine and surgery has been made the primary consideration. It is this which has given the great value to the researches of so many of our pathologists, and has rendered every one of their memoirs a distinct addition to some part of the science of diagnosis and of practice. We are acquainted with no school of medicine where the mere anatomical preparation—no matter how carefully made, but of which the history is unknown—is so lightly esteemed as in Dublin.

After some remarks on the terminology employed in England in reference to the various forms of febrile disease, the author details in full a report of fifteen cases of typhus observed by him in Dublin, to which he adds abstracts of ten others, each presenting some unusual circumstance.

In what we have termed the second part of the work, Dr. Lindwurm examines at length the symptoms, complications, mortality, pathological anatomy, prognosis, causes, and treatment of the "Irish (simple, petechial, or exanthematous) typhus."

The author does not propose to enter at length into the causes of typhus, feeling that for such a task the most accurate knowledge of the geographical, meteorological, and social relations of Ireland would be indispensable; he contents himself with adverting to these points in a general way, but examines more closely the question of contagion. He came to Ireland with some prejudice against the truth of the doctrine of contagion, since most of the proofs brought forward to establish it admit of another explanation. The only proof of contagion which, in his opinion, is absolutely valid, is where a disease is imported by an individual to a place where it did not previously exist, and when it is there disseminated by that affected individual. To such cases the objection, that the persons to whom the disease is communicated exposed themselves to endemic or miasmatic sources of infection, does not apply, and such instances are so numerous, that Dr. Lindwurm can no longer doubt the contagiousness of the exanthematous typhus,

though he can by no means regard this as absolute, or as the sole cause of the disease. The rule is, that persons who come much in contact with patients in typhus are attacked; he himself was spared, although during his two months' stay in Ireland he saw a great number of patients, daily visited two fever hospitals, and observed none of the rules urgently recommended to him by his friends.

Though he must, then, admit the contagiousness of the Irish typhus, he does not think that it is very energetic, since experience shows that when the fever is imported into the families of the better classes, it seldom spreads. Were contagion the only cause of the disease, all individuals, all ranks, should be attacked with it, but it is not so; small-pox, measles, scarlatina,—recognised as contagious diseases,—if they exceptionally spare some individuals, spread in all ranks alike, in the huts of the poor and the houses of the wealthy: the Irish typhus does not so. Its spread depends, in the most intimate manner, on uncleanliness, bad dwellings, imperfect ventilation, unwholesome and insufficient food, over-crowding of individuals in houses, &c. With reference to this point, we beg the especial attention of our readers to the interesting inquiries of the late Dr. Whitley Stokes, which were published in his "Observations on Contagion," in the year 1818, and were quoted in the fourth volume of the present series of our Journal, p. 137.

The author narrates a striking fact, mentioned to him by Dr. Neligan, as showing the influence of diet on the type of fever. When Dr. Neligan acted as physician to the County Tipperary Gaol, in the years 1837 and 1838, an epidemic of typhus broke out in the building: of 400 prisoners, between 50 and 60 were attacked with the disease. Those who had been long in prison, and consequently had a wholesome dwelling and good food, alone exhibited the ileo-typhus, while those who had been but recently brought in presented the exanthematous form. Yet we would be reluctant that this fact, interesting though it be, should be taken as strengthening the opinion first we believe, put forward by Lombard, that the ileo-typhus, or typhoid fever, occurs exclusively in persons who have been well nourished, while the petechial typhus selects for its victims the half-starved and the miserable. Such a doctrine is contrary to all practical experience in Ireland, and we need go no further than the epidemics of 1847 and 1848 to show that the best fed, the best housed, and the best clothed, portions of the community suffered from petechial typus as much as the lower orders.

The author proposes to himself, at the conclusion of his

volume, the investigation of the question,—Is the typhus endemic in Ireland a specifically different disease from the ileo-typhus,—distinct, for example, as measles and small-pox; or is there only one typhus, modified by climate, mode of life, description of diet, &c.?

"I must," he adds, "declare unconditionally for the latter view, viz., that the diseases described as distinct species of typhus are only modifications of one and the same morbid process; of the essence and nature of which we are, however, ignorant." It is unnecessary for us to follow the author into a consideration of the proofs, derived both from his own observation and the writings of others, which he adduces in support of this opinion; but we shall give at length his comments on the views of Dr. Jenner, of London, which agree with the view we took of that author's opinions in our twelfth volume[a]:—

"I will lastly recapitulate and briefly examine the points brought forward by Jenner to establish the non-identity of ileo-typhus and the exanthematous disease.

"According to Jenner, typhus and typhoid fever differ—

"1. 'In the age of the patients: typhus attacks every age, young and old; the typhoid disease principally occurs in persons under 40. It certainly occurs in older people, but this rarely happens.'

"Typhus as well as typhoid fever is a disease of youth; either form occurs more rarely in old people. Besides, a statistical collection of 66 cases is not sufficient to establish such points, or many of the following:—

"2. 'In the mode of attack: typhus attacks suddenly; the typhoid disease generally slowly.'

"Many cases of typhus begin insidiously, with premonitory symptoms, &c.

"3. 'In their duration: the course of typhus is shorter than that of the typhoid fever.'

"In general this is true, since the intestinal affection renders the course of typhoid fever tedious; but the character of the epidemic, and the complications of the disease, have the greatest influence on this point.

"4. 'In the eruption.'

"I can only admit a difference in extent, not in the form.

"5. 'In the colouring of the skin, the expression of the countenance, and the manner of the patient.'

"In an extensive eruption, a greater turgescence of the skin occurs. The expression of the countenance, the manner of the patient,—in a word, the entire portrait of the disease, is the same.

"6. 'In the violence and course of the head symptoms: headach is present in both, but its duration differs: in typhus, it usu-

[a] Page 434.

ally ends on the tenth day, and *always* before the fourteenth; in the typhoid disease it terminates about six days later, sometimes even not before the end of three weeks. Delirium occurs some days earlier in typhus than in typhoid fever; coma is more frequent in typhus, and occurs at an earlier period, &c.'

"7. 'In the degree of muscular weakness: the prostration is greater in typhus, and appears sooner than in the typhoid disease.'

"8. 'The pulse is more variable in typhoid than in typhus fever.'

"These particulars—6, 7, and 8—vary so much in different individuals, that they cannot be considered as general points of distinction.

"9. 'In the frequency of the occurrence of epistaxis: which is very rare in typhus, and tolerably frequent in the typhoid fever (in a third of Jenner's fatal cases, and in nearly one-half of those of Louis).'

"Epistaxis is likewise very common in many epidemics of typhus, as appears from the various reports from Ireland.

"10. 'In the state of the eye: in typhus, the conjunctiva is ordinarily injected, and the pupil contracted; in the typhoid disease, the conjunctiva is pale, and the pupil more dilated than usual.'

"Hyperemia of the conjunctiva is very common in typhus, which is easily explained by the general turgescence of the skin; but a difference in the condition of the pupil can scarcely be established. Graves considers a contracted pupil in typhus to be an extremely unfavourable sign, as do Stokes and many other practitioners. If it were so frequent, it certainly could not be looked on as a prognostic of very bad import.

"11. 'In the condition of the tongue: which in typhus is drier, browner, and thicker; in the typhoid fever it is more frequently small, chapped, red, or partially coated with a light brown mucus.'

"One might just as well assert, that the patients in typhus are larger than those in typhoid fever.

"12. 'In the thoracic symptoms: sonorous rales are very frequent in the typhoid disease; proportionally rare in typhus. Dulness on percussion in the lower part of the lungs (a little above the base), dependent on hypostatic congestion, is frequent in typhus, rare in typhoid fever.'

"In typhus, which is almost always complicated with bronchitis, sonorous rales are said to be rare!!! I refrain from any remark on the alleged difference on percussion.

"13. 'In the abdominal symptoms.'

"That these should be more prominent in the ileo-typhus is natural. But abdominal symptoms sometimes also occur in typhus; gurgling (Gurren), tympanitis (Meteorismus), diarrhœa, &c.; while they are often absent in the ileo-typhus.

"14. 'In the occurrence of sequelæ: bedsores are equally frequent in both; erysipelas, phlebitis, local inflammations, and ulce-

rations, are much more common in the typhoid disease; deposit of tubercle in the lung, too, more frequently follows the typhoid fever.'

"All these affections likewise occur after typhus. The proportion in which they more frequently accompany either form could only be ascertained by numerous statistical observations.

"15. 'In the persistence of the eruption after death: the spots of typhus continue evident after death; the rose-red spots of the typhoid disease are not to be seen.'

"A truly superficial statement. Spots caused by mere hyperemia disappear on death, and of such kind are the rose-red spots; but these occur both in typhus and in the typhoid disease. Eruptions caused by exudation or extravasation continue visible after death. We will never see the measly, bright-red eruption of typhus, which disappears on pressure, after death.

"16. 'In the duration of cadaveric rigidity': which, according to Jenner, disappears sooner in typhus than in the typhoid disease.

"17. 'In the more rapid dissolution of the tissues in typhus than in typhoid fever: for example, speedy separation of the epithelium from the subjacent membrane,' which, according to Jenner, can be well observed with the microscope in a section of the kidneys.

"18. 'In the frequent occurrence, in typhus, of hemorrhage into the arachnoid membrane:' according to Jenner, this occurred in an eighth of the fatal cases, while, on the contrary, it never took place in the typhoid disease. In typhus, too, a large amount of serum is found in the ventricles of the brain.

"19 'In the frequency of ulceration of the mucous membranes in the typhoid disease, and its comparative rarity in typhus: in about a third of the cases of typhoid fever, we meet ulcerations in the pharynx, while in typhus they never, or but seldom, occur; likewise ulcerations in the larynx, œsophagus, large intestines, &c.'

"But Jenner himself admits that they also occur, though rarely, in typhus.

"20. 'In the morbid alteration of Peyer's and the mesenteric glands: which, although it varies greatly in intensity, is constant in the typhoid disease, and, on the contrary, *never* occurs in typhus.'

"The observations of Stokes, Kennedy, Wood, Watson, and Todd, prove that this statement is not absolutely true.

"21. 'In the greater softness and flaccidity of the muscular substance of the heart in typhus than in the typhoid disease.'

"I found in typhus only the same relaxation of the heart that exists in all very acute, exhausting diseases.

"22. 'In the frequency of lobular and lobar pneumonia in the typhoid fever, and its rarity in typhus: hypostatic congestion, in the dependent portion of the lungs, is more frequent in typhus, but true inflammation is rare.'

"In the few dissections I made of typhus, I had two cases of recent croupy pneumonia; in many epidemics they are, according to

the statements of physicians, very frequent. Hypostases are almost always found in the bodies of persons dead of typhus and typhoid fever.

"23. 'In the more frequent occurrence of pleuritis in the typhoid disease (40 per cent. of the fatal cases, according to Jenner) than in typhus (5.5 per cent.).'

"Pleuritis is certainly an accidental complication, just as pneumonia is, and might very much depend on the character of the epidemic.

"24. 'In the degree of softening of the spleen: which is more considerable in typhoid than in typhus fever.'

"I found enlargement of the spleen likewise more constantly in ileo-typhus.

"25. 'In the mortality: which, according to Jenner, is greater in typhoid than in typhus fever.'

"This agrees with my observation, but others have found it greater in typhus. This, also, must surely depend on the virulence of the epidemic.

"With the exception of the diffused eruption in typhus, and the affection of the glands of the ileum and mesentery in the typhoid disease, the other points of distinction appear to me to be only artificial, arbitrary, or accidental. And since, as many observers state, the diffused eruption and infiltration of Peyer's glands occur together; the entire portrait of the disease is the same; the sequelæ are the same; both forms arise from *one* contagion; and a convalescent from typhus is never attacked by the typhoid fever, nor a convalescent from the latter by typhus,—I must, in the most decided manner, confess myself a believer in the identity of the two forms, and agree with the view of those who assume but *one* typhus, with a variety of modifications."

The concluding paragraph of Dr. Lindwurm's work consists of a vindication of Dr. Stokes' views on this subject, which seem to have been misunderstood by a French writer. It is as follows:—

"Lastly, I consider it to be my duty to refute a statement to be found in the last edition of Valleix' 'Guide du Médecin Praticien'[a]:—'Il n'est pas aujour d'hui en Irlande de médecin instruit qui ne distingue pas parfaitement les deux maladies. M. W. Stokes qui a écrit sur le traitement de typhus, et dont tout le monde connait l'habileté, ne conserve pas le moindre doute à cet egard.' I must distinctly designate this statement as incorrect, having, in the course of an intimate personal acquaintance with Dr. Stokes, very often had the opportunity of conversing with him on the subject; he knows but ONE TYPHUS, with a variety of forms."

[a] Paris, 1851. Tom. v. p. 483.

In conclusion we must say, that seldom has the perusal of a book afforded us greater pleasure than we have derived from that of the work we have just reviewed. It is not merely the talent and clearness with which the author has treated his subject which have produced this effect, although these would have been sufficient to do so. The cordial, genuine interest which Dr. Lindwurm evidently takes in the welfare of the Medical School of Dublin gives it a high value in our eyes, as the best proof of the kindly feeling he entertains towards Ireland.

A Treatise on Removable and Mitigable Causes of Death: their Modes of Origin, and Means of Prevention; including a Sketch of Vital Statistics, and the Leading Principles of public Hygiene in Europe and India. By Norman Chevers, M.D., Bengal Medical Service, &c. Calcutta. 1852. 8vo, Vol. I. pp. 329.

It is not long since we had the pleasure of bringing under the notice of the profession Dr. Chevers' able essay on the Management of Diseases of the Heart, and of which we felt it our duty to speak in laudatory terms. We are happy in again having an opportunity of renewing our acquaintance with him, and noticing the recent production of his pen on the all-important subject of public hygiene. No one can doubt that this, as Dr. Chevers remarks, is "the most vitally interesting scientific subject of the day," and affords an illimitable field for observation and anxious inquiry. Hitherto the public, or indeed the medical, mind has not been sufficiently impressed with its magnitude or vast importance. During the progress of severe epidemics, or when threatened with some pestilential visitation, it is true that the community has been aroused to something of active exertion, and medical men in abundance have become essayists on the principles and benefits of sanitary reform; but no sooner has the epidemic passed away, or the signs of the threatened invasion become less alarming, than the former relapse into wonted apathy, and self-satisfied, though false, security; while the latter generally retire from the vantage-ground which many of them so beneficially occupied, until a new note of alarm again excites to action: then the same scenes once more take place,—floods of sanitary literature re-deluge the press: again comes a lull: anon, apprehension and bustle, as before,—and so on: thus, between excitement

and inaction, fervour of exertion and cold indolence, all seem to labour under a kind of moral ague! Certainly there are exceptions, though few, where the people and the authorities exhibit some practical wisdom in their unrelaxing efforts to improve the sanitary condition of the localities in which they are most interested; and some medical sanitary reformers, either by their personal exertions or through the press, endeavour to fix the public mind upon the beneficial results which must accrue from the due observance of hygienic principles.

Among the latter, the author of the Treatise under consideration must be admitted now to occupy a conspicuous place, and to have produced one of the best and most comprehensive books yet published on the subject, and that, too, under difficulties of no ordinary kind. On these difficulties, the author offers the following observations in his introduction:—

"With the exception of the substance of a few articles, published some years since in a London medical review, the whole of the materials of this Treatise have been collected at Chittagong, during the unfrequent intervals of leisure allowed by extensive medical duties. This is, assuredly, no valid excuse for the enunciation of defective principles; still, some allowance may be claimed for the scantiness of statistics gathered at a remote India out-station, under the disadvantage of a slow and limited supply of books, and without the aid of a single correspondent;—as well as for admitted narrowness in the views on political economy entertained by a writer who merely lays claim to a knowledge of medicine, and who presumes to anticipate no more allowance from his readers than a concession of the principle 'Quisquis suâ arte credendum est.'"

Then he very justly adds,—

"Nevertheless, the following pages contain details the collection of which, it is trusted, will save the reader a good deal of tedious and laborious reference; while in the aggregate they may furnish a sufficient introduction to the subject for those who are desirous to join in the great work of spreading the benefits of sanitary reform at home and in the colonies.

"Further, the author ventures to believe, that in the correlation of these facts, and in the deductions gathered from them, a first approach has been made to the desideratum of blending the principles of the English sanitary system into the form of an independent science: hence these chapters are submitted to the public and the profession."

We are not aware of any previous publication in this country which reduces the principles of sanitary reform into anything like the same systematic arrangement as that observed

by our author, to whom may be justly awarded the credit of having first reduced "the principles of the English sanitary system into the form of an independent science;" nevertheless the book is popular enough to recommend it to the serious attention of the public; and we feel that no one can rise from a perusal of Dr. Chevers' volume without being impressed with the vital importance of the matters submitted to discussion, and the ability with which its accomplished author has entered upon this most interesting and comprehensive subject.

The first section of the book is devoted to a consideration of the "Removable and Mitigable Causes of Death, their Modes of Origin and Means of Prevention," and opens with the following important and unquestionable enunciation:—

"During the past century, statistical research has developed two extremely important facts in the physical history of mankind, namely, that the mean duration of human life is generally less than half that of the three score and ten years commonly assigned as the term of man's existence; but that, on the other hand, communities have it, to a certain degree, in their power to diminish and restrain the causes by which the lives of their members are thus abridged; and it has become evident that, in consequence of the judicious employment of this power, the average duration of life amongst us has been for many years slowly but progressively on the increase."

This statement, and the facts on which it is based, would, if known and properly understood and appreciated by the community at large or the authorities, certainly lead to a course of conduct different from that usually pursued, and to which we at first adverted; and well would it be for mankind if those who have the power of legislating were to ponder on the truth of, and act on a similar belief to that with which our author is impressed, and to which he thus forcibly gives utterance:—

"Foremost among the duties of the physician and of the legislator stands the obligation of investigating and remedying the causes which have led to the present deterioration of human life. While mankind in civilized countries continue to fall under the self-imposed curse of dying, in the generality of instances, before the expiration of their prime, ere the natural and irresistible advances of age have commenced their inroads, all learning, art, and science, must yield in importance to the great object of improving the PUBLIC HEALTH of communities.

"There must be something morally as well as physically degraded in a people who have sacrificed the power of attaining old age. If it be true, as it assuredly is, that to live worthily and to live long are the two chief desiderata of man's condition, any horde

of robust savages are to be regarded as our masters in the art of obtaining the second object of human existence."

How humiliating to feel that after all our boasted moral and physical advantages over uncivilized peoples, many of them surpass us in obtaining what Dr. Chevers calls "the second object of human existence." With respect to the legal prevention of disease he makes the following strictly correct observations, and well would it be for society were the powers of the lawmakers directed to the end at which the author aims. He says:—

"The resources of the physician may do much in anticipating and in relieving disease in detail; but the power of the lawgiver, if well directed, may do infinitely more in adopting salutary measures which, when properly carried into effect, must materially check the development of large classes of the most destructive maladies. It is demonstrably a fact that, to mankind generally has been given the power of maintaining their own existence for a given period—say seventy years; but the accumulated ills and errors of centuries have, in a great measure, prevented this power from being exercised by the individual; thus, no care or moderation on his own part can enable the sickly and half-starved offspring of an ill-fed, vicious, and diseased race, inhabiting a dark and squalid hovel, in a badly drained and pestilential district, to avoid altogether the assaults of the sickness by which he appears to be doomed to an early death; but the Legislature possesses to a certain extent the means of averting from him this evil, and of almost freeing his descendants from the injurious influences under which he suffers. He has not the power of removing from the over-populated neighbourhood in which he lives, where the excessive accumulation of human beings, and the consequent impossibility of their receiving proper support, renders a high rate of mortality among them a necessary and merciful dispensation: but new and productive lands are open to him. The Government may enable him to emigrate. He cannot avoid the pestilential exhalations of the unhealthy quarter in which his dwelling is situated, but the municipal authorities may correct this evil. He must either work for an undue number of hours, at an unwholesome trade, in a badly ventilated manufactory, or resolve to meet death by starvation; but the law may compel his employers to place upon him no kind or amount of labour beyond that which he is able to bear, and to provide for the proper ventilation and cleansing of the work-rooms in which he toils. He cannot, it is true, throw off the faults of constitution which have descended to him from his poorly nourished and intemperate forefathers; but the Legislature (in providing that his remuneration shall be sufficient to procure wholesome food and proper shelter for himself and his family, and in removing from him, to a considerable extent, the temptation to the destructive use of spiri-

tuous liquors) may succeed in prolonging his life, and in rendering his progeny a comparatively healthy race."

These views are neither extreme, nor, as some might imagine, Utopian; we may not hope to see remedies all at once applied to the many evils that surround the poor, but we trust that the period is not far distant when the Legislature will feel it an imperative duty to improve the physical condition of the labouring classes, by enforcing an observance of those salutary principles of hygiene which avarice on the one hand, and ignorance on the other, have caused to be despised;—when municipal authorities, and public bodies possessing like power, shall look upon sanitary police as the very highest of the social requirements, the care of the public health their primary consideration;—when those who look upon disease as the *necessary* result of man's primeval fall, fit retribution for his disobedience, will take a more benign view of the case, learn that much of his temporal affliction is self-imposed, and that it is no transgression of the divine law for man to seek the extension of the usual limit of his life, or to feel that it is within his own power to increase the present term of human existence. The ascetic who considers or says that disease is a direct visitation of wrath from the hand of God, and who therefore forbids us to trust in any human effort, would certainly place a great stumbling-block in the way of the sanitary reformer, if such *vis inertiæ* was based either upon divine revelation or reason; but as it is manifest that any such deduction is false, it is to be hoped that there are few so shallow as to follow a course fit only for blinded fatalists to pursue. Disease is either preventible, or it is not:—if preventible, as it doubtless is, what is our reasonable course? Hear what Dr. Chevers says upon this subject. After stating that "physicians, in reviewing the history of disease, can discover no form of painful or destructive malady which bears in itself the united characteristics of an *invariable, essential,* and *inevitable* portion of the divine plan in limiting the term of human existence,"—he goes on to say:—

"Prophylaxis, or the means of anticipating and preventing various diseases in individual cases, has always formed a leading part of the physician's duty; but the means of searching into the original causes of general diseases, and of preventing their development in the aggregate, constitute a new science, which, though still in its infancy, gives promise of assuming eventually a position, as a system, of exact and essentially philosophic principles, far more exalted than our present art of treating disease in detail can ever attain.

"In this age, sanitary reformers have learned that the only sure

mode of obviating large classes of destructive diseases is to attack their causes at their very source. The great causes of pestilence are found to arise, death-laden, from morasses, and fens, and oozy, alluvial flats; to hover in the poisonous exhalations from fetid sewers, reeking slaughter-houses, manure heaps, and graveyards in which the dead are packed in bulk; to spread from the destructive vapours which, issuing from chimneys, gas works, manufactories, and crowded assemblies of human beings, hang like vast palls between our great cities and the sunlight; to originate from the overlabour or the hopeless inactivity of large classes of mankind, their wants, their vicissitudes, their excesses, and their moral defects."

These are among a few of the causes which originate disease: there are other fertile sources, which are alike palpable and removable as the evils just enumerated evidently are; but then the great difficulty is, not in perceiving these evils, but in applying the proper remedies. There is such a mass of ignorance and selfishness to be overcome, prejudices and opposition to be combated, vested rights and interests to be met, that the work of sanitary improvement is impeded at every step, and the philanthropist is rendered almost hopeless of his efforts to ameliorate the condition of man; and, indeed, there never can be a thorough assault made upon the most prolific sources of disease while the Legislature esteems sanitary matters as not even of secondary consideration, or while it yields to the clamour and selfish demands of those who, at the expense of the lives of the community, claim the observance of vested rights;—or while it will not decree that no person can perpetuate aught which is injurious to the public health, when even the individual may show that he has acquired a "vested right" in it! It is clear, that until the Legislature shall decide that all such noxious interests shall cease; that no one can have a vested right in ponds of stagnant water in cities and towns, the receptacles of every abomination,—in open ditches, cesspools, and manure heaps, the prolific generators of pestiferous exhalations,—in reeking slaughter-houses, and graveyards overflowing with rottenness, alike disgusting to the senses as unquestionably detrimental to health,—in manufactories of various kinds, which vomit forth their noisome gases and suffocating smoke every hour of the day;—till then, and *not till then*, may the sanitary reformer hope to make sure progress in his truly civilizing vocation. It is absolutely necessary that the Legislature should take this momentous duty upon itself, and enact a general and *sweeping* law upon the subject, not leaving it in the power of this body or that body to adopt or refuse the introduction of hygienic laws,—

for any corporation, the members of which may themselves be interested persons, to deny to their locality the benefits ofhealth regulations, as we have seen in more than one instance, and from besotted ignorance, a grovelling disregard of all decency, or a slavish courting of vulgar popularity, refuse to adopt either those national measures applicable to sanitary improvement, or those local enactments which give them the power of dealing summarily with many of the most grievous public wrongs. We feel, as regards this subject, it is a duty we owe our profession to say, that many of its members have spoken frequently and forcibly, and that, throwing aside all personal considerations, they have entered heartily into devising the best means for removing the sources of preventible disease; but while we say so, we must also state, that others have either sneered at sanitary matters—perhaps from want of due consideration of the subject, or from some undefined reason, have treated them with cold indifference. To the one class we would repeat, persevere in your laudable efforts, regardless of any result but the promotion of the public good; to the other we say, reconsider your position, and ponder well whether it is honest, generous, or even *prudent*, to hold back from, much less contemn, a pursuit which, though not *now* appreciated, must place the medical profession in the most noble and dignified place which men can occupy, that of leaders in the march of moral and physical improvement, in social civilization, in increasing the span of human existence, its happiness and usefulness, and in developing the highest resources of our honourable art!

After fully discussing the removable causes of death and the means of prevention, Dr. Chevers goes on, in the second section of his book, to inquire into "the modes of encountering removable causes of death." These he considers under twenty-five separate heads, and gives to each a due share of attention. In a notice like the present, it is evident that we cannot even enter upon an analysis of each of these divisions; we shall therefore content ourselves by laying before our readers the heading of the several subjects discussed, from which it will be seen that Dr. Chevers has left little, if anything, in this important question which he has not duly considered in relation to man's temporal welfare, the promotion of his happiness, and the prolongation of his existence:—

"We have seen that a large proportion of the deadliest and most prevailing diseases are the results of circumstances which it is in the power of humanity to control, and, perhaps, eventually to remove altogether; that, although the universal gift of old age can be looked for only among the blessings of the promised millenium,

the power of considerably extending the term of his existence lies tangibly within the grasp of man, and that this faculty of moderating the great causes of death rests with the lawgiver rather than with the physician.

"We have now to consider some of the legislative measures and social rules which are obviously necessary for the diminution of the most prevalent causes of disease, and for the general prolongation of human life. The following appear to be the most requisite:—

"The encouragement of emigration from over-populated districts to healthy and productive colonies.

"The embankment of rivers, and the draining and cultivation of marsh and waste lands.

"The infliction of heavy penalties upon all persons found guilty of adulterating any medical drug or any article of sustenance, or of vending the flesh or milk of ill-fed or diseased animals.

"Restriction in the sale of ardent spirits and of other intoxicating drinks.

"The proper building, ventilation, lighting, and drainage, of houses, particularly those of the labouring population.

"The abundant supply of pure water to towns.

"The proper cleansing of all streets and thoroughfares.

"The clearing, regardless of opposition or expense, of all confined and notoriously unhealthy districts of cities, and the partition of the spaces of ground thus obtained as the sites of appropriate dwellings for the poor.

"Prohibition of the intramural burial of the dead.

"The removal of all cattle-markets, slaughter-houses, piggeries, tan-yards, gas-works, &c., beyond the confines of towns.

"The general adoption of means for consuming the smoke of towns.

"The erection of all extensive manufactories at the distance of at least two miles from the confines of large towns, with the provision of their being constructed in healthy situations, with proper regard to security, ventilation, warming, &c.

"Prevention of the retail sale of poisons.

"The suppression of all those trades which, while they produce no substantial benefit to the community at large, entail almost certain destruction of life or health on those who practise them; and the careful modification of all those useful trades or occupations which are attended with danger to health or risk of life.

"The due remuneration of the working classes (especially in the manufacturing districts), and the proper limitation of their hours of labour.

"The opening of baths, wash-houses, and places of exercise, for the use of the working classes in the vicinity of crowded cities and in manufacturing districts.

"The establishment, upon an extensive scale throughout the country, of houses of temporary refuge for the destitute, where medical aid may be received, as well as assistance in obtaining proper employment.

"The introduction of better and more liberal rules than are at present in operation for the medical relief of the destitute sick, and for the support of incurable patients.

"The establishment of judicious systems for the reduction of the mortality in lunatic asylums, gaols, and workhouses.

"The adoption of measures encouraging the poor to bring their children to be vaccinated.

"The employment of means tending to reduce the mortality among the children of the poor.

"The maintenance of a strict hygienic system among sailors and soldiers, at home and abroad.

"The enforcement of a well-conducted system of quarantine, whenever the introduction of pestilential disease is to be apprehended.

"The strict prohibition of the practice of medicine and surgery, as well as the sale and compounding of drugs, by unqualified persons.

"The gradual introduction of regulations calculated to improve the *morale* of populous districts, and to diffuse religious and useful instruction among all classes of the people."

These are the divisions or chapters into which Dr. Chevers divides his subject. A few of the matters referred to have, as the author remarks, long been observed, either under legal provision or from humane motives; but the great majority of them are still untried, and without any legal enactment to enforce, or social consent to sanction, their observance, though the sanitary reformer sees the necessity for these or like comprehensive measures being enjoined by legislative interference.

We regret that we are precluded from entering more fully into the subject of Dr. Chevers' excellent book; but we cannot dismiss it without saying, that by its publication he has done much for the cause of sanitary reform, especially as it is written in a clear, popular style, and embraces every material point in connexion with the question.

We fear, however, that the time has scarcely arrived when even the most useful and popular work on hygienic medicine and police will meet with due attention from the public, and to which the publication under notice is most decidedly entitled. There are such lax views on the matter,—so many selfish interests opposing it,—there are so much apathy, ignorance, and vice in the world, that until education, especially of the masses, has made more progress, we can scarcely hope to fix the popular mind upon a subject which, although of vital importance, is still too commonly viewed as one of the mysteries of medicine.

If this Treatise were issued in a condensed and cheap form, and *if people could be induced to read anything* on vital

statistics, we are not acquainted with any book previously published on the subject which is calculated to do more good, or spread more sound and enlightened doctrines; but from the negative elements to which we have referred, we believe that the most popular book of the kind would not be extensively read, especially during the lull which has succeeded the late epidemic explosions. The first great fillip to sanitary progress must, as we have said before, be given by the Legislature, in enforcing due observance of its primary principles; then, also, should these principles be made a part of elementary and general instruction in schools and colleges, so that every one who receives even an ordinary education must in some measure become acquainted with them. Were this great desideratum in popular instruction once accomplished, then would Dr. Chevers' able Treatise be an admirable text-book for either scientific or popular instructors; and we trust that we shall yet see it in this position, to which we regard it as justly entitled.

Topografia Médica de la Ciudad de Málaga. Por D. Vicente Martinez y Montes, Jefe facultativo del Hospital Militar de Málaga, etc., etc. Málaga, Circulo Literario. Imprenta de D. Ramon Franquelo, 1852. 4to., pp. 577.

Medical Topography of the City of Malaga. By Don Vicente Martinez y Montes, principal Medical Attendant of the Military Hospital of Malaga, &c., &c. [With a Plan of the City, by Don Rafael Mitjana, Architect.]

Change of Climate considered as a Remedy in Dyspepsia, Pulmonary, and other Chronic Affections; with an Account of the most eligible Places of Residence for Invalids in Spain, Portugal, Algeria, &c., at different seasons of the year; and an Appendix on the Medical Springs of the Pyrenees, Vichy, and Aix-les-Bains. By D. J. T. Francis, M.D., &c. London: Churchill. 1853. Royal 12mo., pp. 339.

Climate of Italy in relation to Pulmonary Consumption; with Remarks on the Influence of Foreign Climates upon Invalids. By T. H. Burgess, M.D., &c., lately Physician to the Blenheim-street Dispensary. London: Longman, Brown, Green, and Longmans. 1852. 12mo., pp. 206.

Of the three works, the titles of which are given above, we give precedence to that of the Spaniard[a], as an acknowledgment

[a] The translations from the Spanish in this review have been made by Dr. W. D. Moore, as also the reduction of the Scales to suit the English reader.

of many civilities received by us from his countrymen, whom we regard as one of the most ceremonious races of civilized Europe; the work, however, is evidently that of a painstaking observer, and the Medical Topography of Malaga, by D. Vicente Martinez y Montes, is a publication of no ordinary merit, as emanating from the Spanish provincial press, tending, moreover, to afford the solution of a problem which we have more than once debated, as to whether Spain still possessed literary pretensions sufficient to entitle her to rank with the scientific and progressive nations of the world. After a careful examination of its contents, we at once freely admit its title to a position amongst the useful productions of the day; and are inclined to think that a vast amount of literary talent lies dormant in the native country of the author for want of adequate inducements to draw it forth: just as we know her natural resources and mineral wealth are inexhaustible, but lack the capital and energy of an industrious people to turn them to account. In this cursory review of an elaborate work on the topography, natural productions, climate, history, diseases, moral, intellectual, and industrial state of Malaga, we mean to confine ourselves to the sections on its climate and diseases, being those which we consider most interesting and important to the physician. As, however, the geological formation of a locality ought always to be considered in reference to its climate, we may premise that the district of Malaga presents in some parts the characters of the secondary or cretaceous, in others, of the supra-cretaceous or tertiary formation.

The mean annual temperature of the town during nine years, from 1837 to 1848, both inclusive (1842–3–4 being, however, omitted), was 66·452 F. In each of the four seasons the mean temperature was as follows[a]:—

Winter,	.	55·61 F. (January, February, and March.)
Spring,	.	68·5 F. (April, May, and June.)
Summer,	.	80·38 F. (July, August, and September.)
Autumn,	.	61·3 F. (October, November, and December.)

The mean annual height of the barometer during the above nine years is given as 29·7936[b]:—

Winter, ...	29·7794.
Spring, ...	29·7519.
Summer, ...	29·8897.
Autumn, ...	29·7952.

[a] The thermometric readings have been reduced from the Centigrade to Fahrenheit's scale. The division of the seasons are the author's.

[b] The barometric readings are reduced from millimetres to English inches.

The relative frequency of the several winds at Malaga for the same period is given as follows:—East, 988; South-east, 517; South, 429; South-west, 714; West, 779; North-west, 858; North, 443; North-east, 347.

"The winds are given in the order of their rotation:—If, for example, the day breaks with a west wind, at midday it will be either N. W., or N., or N. E.; in the evening, E. The E. is followed by S. E. or W.; I have never observed the contrary direction. Frequently the transitions are more rapid, the intermediate winds not being perceived; that is to say, from the E. it changes to the W., or *vice versâ*. The Table shows the times that the different winds have prevailed in the years which have served as a basis for the deductions I have given, which also agree with the observations taken by myself."

Tables showing these particulars for each month are given by the author. January is, on the average, the coldest month, the mean of the nine years being 53° 1′ F. The lowest temperature given in the Table is 42° 9′, noted in February, 1839. The hottest month is August, the mean being 81° 89′. The highest temperature given in the Table is 98° 15′, in September, 1847. Once, on the 29th of August, 1851, the author observed it hotter, the thermometer standing, during a burning land-breeze, at 104° in the shade.

The mean annual quantity of rain deduced from the five years—September, 1846, to August, 1851—amounts to 15·9842 English inches.

The state of the atmosphere in the nine years above mentioned was,—clear, 1974 times; cloudy, 691 times; rainy, 262; with light clouds, 988; foggy or misty, 16; and tempestuous, 3 times.

"It will thus be seen that the rainy days bear a very small proportion to the fair. The greatest number of rainy days was in January; this diminishes very gradually until the end of May; rapidly in June, July, August, and September. During these latter months it rained in the nine years only twice in June, three times in July, twice in August, and four times in September. This want of rain would be more prejudicial, both for plants and animals, in an inland town, but the proximity of Malaga to the sea prevents these bad effects. The evaporation continually taking place from the waters of the Mediterranean, in consequence of the more or less elevated temperature of the day, occasions at sunset a deposition of dew, which is in some localities, especially those nearest to the sea, so copious as to give an appearance as if rain had fallen; the hygrometer showing a different proportion in the humidity of the air for each month of the year."

In the third part of his work Señor Martinez enters on a consideration of the sanitary state of Malaga; and, after some prefatory remarks, presents us with a Table of the several epidemics which have visited that town, and of the dates of their appearance, commencing with the ravages of the plague in 1348. The greater number of these epidemics prevailed throughout the whole Peninsula, and, consequently, were not due to any peculiar conditions of the city; the others, with the exception of catarrhs, typhus, and fevers of various kinds, were also imported. Excluding these, the epidemics were the same as those which made so many victims in other parts of the world, being the result of the combination of physical, atmospheric, or moral causes: the last known, while of the former we are probably destined always to remain in ignorance; they consisted in several attacks of plague, a visitation of black vomit, two of yellow fever, and lastly, in 1833, one of cholera morbus. Among the fevers, typhus prevailed in 1719 and 1738, and camp fevers in 1751. On the whole, the author refers to the occurrence of twenty-four epidemics between 1348 and 1833, and considers that they raged in consequence of deficient hygienic arrangements. To this conclusion he was led by considering the mildness of the climate, the purity of the air, the goodness of the water, the abundance of food, and the absence of marshes and lakes, of occupations prejudicial to health, and of other elements in the causation of endemic diseases.

Notwithstanding all that the author has, in a previous part of the work, pointed out for improvement, he states his conviction that the sanitary condition of Malaga is very good, and comparable to that of any of the most healthy cities. In support of this view he appeals to the proportion of deaths to the population, which is more favourable than in many other capitals having greater resources for putting in practice all that hygienic science can suggest; and he points out that in Malaga there are no endemic diseases. He further refers to the longevity of the inhabitants, and shows, by Tables, that in the decennial period 1840–1849, fifty-six individuals attained to upwards of one hundred years, one of whom reached the great age of 115. The number of those who lived to above 60, 70, 80, and 90, is proportionally great.

The second chapter of this division of the volume contains some Tables, the first showing the diseases which prevailed in Malaga in each month of the year 1851, and the number of cases which occurred of each disease; the second is a similar Table for the military hospital, but more valuable, as it extends over ten years; the third, likewise arranged in monthly co-

lumns, exhibits the number of crimes committed during five years, under the heads of contusions, wounds, homicides, suicides, and rapes. The number of suicides appears remarkably small, being only eight for the five years.

The total number of cases of illness in Malaga, exclusive of the military hospital, in 1851, was 4530, the most numerous class of diseases being the gastro-enteric, which amounted to a total of 961. In the military hospital these were also the most frequent, constituting 2001 of 5686 cases of illness which occurred in the ten years. The population of the city is upwards of 80,000.

"Among the affections comprised under the head of diseases of the respiratory organs, we have," observes the author, "pneumonia and pleurisy, either simple or combined, the latter being the more common; bronchitis or catarrh, varying from the slightest to the most intense degree, an affection which is five or six times more frequently met with than the others; hemoptysis, which is very rare; laryngitis, with hooping or convulsive cough and croup or quinsy,—the former terrible for its obstinacy, the latter for its severity, which two diseases usually prevail epidemically, in consequence of certain conditions of the atmosphere which often cannot be explained. These, with the exception of the last, frequently pass into the chronic state: we have also phthisis, but so rarely that of 4530 patients during the period we speak of, only 65 were cases of this disease."

In the Table we find 30 cases of apoplexy. Finally, 137 cases of small-pox show how shamefully vaccination is neglected, as well as the necessity of promoting the use of this precautionary measure by all possible means. The author next deplores the large number of syphilitic cases presented in the Table—they amount to 675; and lastly remarks that the number of wounds (242), occurring in the space of twelve months, is a disgrace to a refined and cultivated city like this, and points out the necessity of correcting the vice of intoxication, to which especially such occurrences are attributable.

Of the diseases of Malaga, thus in a general way described, the author observes that some are due to topographical, others to atmospheric, and the smallest number to special causes. The temperature, of which an account has been already given, and the dry state of the atmosphere—the constant change of wind even in the same day exciting the circulation and closing the pores, predispose some individuals to, and in other persons directly develop, inflammatory affections, though the latter are, generally speaking, not so intense as they are observed in cold countries:—

"These phlogistic effects are principally observed when the land or north-east breeze prevails. This wind, commonly hot and burning, produces bad effects both on vegetables and in human beings, causing in the latter violent pulmonary and cerebral congestions."

The author proceeds to inquire whether the north-east or east wind is the more healthy, and quotes some passages from a work entitled *Conversaciones Malagueñas*, to show that the opinion of the older writers was in favour of the former. He is, however, of opinion that both theory and facts are opposed to this view, and observes, that the north-east wind, burning in summer, cold in winter, produces, both in healthy and sick individuals, an excitement and tension which aggravates chronic complaints, especially such as are of a phthisical nature. Moreover, it augments the heat of the body, dries the skin, checks the slightest perspiration, and thus produces congestions of every kind,—above all, those of the brain. He refers to the table of criminal statistics we have already mentioned to show, that injuries to the person, homicides, and suicides, occur much more frequently during the prevalence of this wind than at any other time, and adds, that it undoubtedly causes other affections of the encephalon than those which are attended with violent inflammation, disturbing the functions of the cerebral organs, and producing paralysis, a disease very common in Malaga.

"The east wind does not produce these changes: cold and damp at all times, but more so in winter than in summer, it causes rheumatism, but not paralysis; numberless catarrhs, pneumonias, pleurisies, violent hemicranias, and neuroses of various kinds, sometimes by its own direct impression, sometimes by suppressing the perspiration produced in the cold season by the least exercise, and which occurs in summer without exercise; it predisposes also to some affections of the digestive apparatus, these organs losing the strength requisite for the fulfilment of their functions; still, its bad effects are neither so general, nor of so great intensity, as those occasioned by the other wind; and, therefore, I consider it to be more healthy."

The author makes a few observations on the diseases peculiar to certain trades; these scarcely call for our attention, as they differ little from those which are found in other parts of the world. In a cotton factory it was thought that the inspiration of the dust of the cotton produced irritation and inflammation of the laryngo-bronchial mucous membrane. Some practitioners imagine that a species of erythema was caused by contact of the skin with the same, and spoke of ophthalmia provoked by its reaching the eyes. Herpetic eruptions prevailed

in the portions of the town occupied by fishermen, and hydroceles were common in a district almost exclusively inhabited by coopers.

The remaining chapters of Don Martinez y Montes' work abound in general information respecting Malaga and its vicinity. The volume is brought out in a creditable manner, is printed in a large and distinct type, and is accompanied by a lithographed plan of the city on the scale of 240 varas or yards to the Spanish inch.

We gladly greet a new English work on climate, particularly as it purports by its title to treat of districts as yet little known, and in our opinion not sufficiently appreciated by the public and the majority of the profession. The climates of Spain, Portugal, and Algeria, have only of late attracted any degree of attention, and that mainly through the instrumentality of rapid, safe, and constant steam communication to and from the principal ports of the Peninsula, and the somewhat notorious French possessions in Algeria. However, the very facilities afforded by the improvements of modern travelling, rather throw difficulties in the way of an observer trying to acquire correct statistical information as to the relative merits of different localities, for he is too apt to be led on, tempted from place to place, and thus, from a necessarily short sojourn in each, to acquire imperfect information regarding all, being obliged to trust to the data of others, ignorant, perhaps, of the peculiar circumstances under which such data were obtained, and the amount of attention or negligence displayed in their compilation. Dr. Francis informs us in his preface, that a prolonged professional engagement, as well as a subsequent residence in Italy, afforded him the opportunity, during upwards of five years spent in different countries abroad, of studying the subject of which he treats. Two of these winters were passed by him in Italy, the other three in the Peninsula. The first chapter opens with a comparison of the respective climates of the countries he resided in, and an attempt to account for the fact of the superiority of that of Spain over those of the south of France, Italy, Malta, and Greece, being so long overlooked. The more southern latitude of the Peninsula is dwelt on as affording many advantages over the more northerly places of common resort in Italy. The latitudes of Rome and Naples, for instance, are respectively $41\frac{1}{2}°$ and $40\frac{1}{2}°$, whilst that of Malaga is $36\frac{1}{2}°$. The aspect of the latter is also highly spoken of as contrasted with that of the two former, and the prevailing winds of each partly accounted for from the physical disposition

of the two countries. The results of all comparisons tend to show the great superiority of the climate of southern Spain over that of Italy.

The book is divided into two parts: the first consisting of observations "On Climates in general;" the second "On particular Climates."

Under the first heading, the author treats not only of the comparative merits of different climates, but also of the diseases likely to be benefited thereby. This arrangement may, perhaps, suit the unprofessional reader, but for our part we much prefer that of Sir James Clark, who, in his standard work, first considers "climate," and secondly, "the diseases benefited by climate."

Dr. Francis, wisely, in our opinion, gives only an incidental notice of the climates of England: "Not," as he says in his preface, "from a distrust of their remedial merits in some states of deranged health, but from the fact that they have already received attention from previous authors." In comparing the climates of Algiers and Malaga with that of England, we find it stated as follows:—

"At Malaga exercise may be taken, and several hours passed in the open air, almost daily throughout the winter. There is a comparative absence of rain; for we shall see hereafter that the average number of days on which rain falls in the year is, at the utmost, only 40. Now, in the mildest spots in England, supposing that we escape frost and severe cold, it is necessary to reckon upon 150 rainy days in the year (Torquay, 132; Penzance, 178; Hastings, 153), besides a certain amount of fog, damp, and clouded atmosphere. For the invalid this implies the necessity, on many days, of taking exercise indoors if he take it at all, and it implies an imperfect ventilation."

Under the head *choice of climate*, the author offers many useful hints, which invalids would do well to follow. The advantage of moving about from place to place, either at home or abroad, is justly acknowledged by him as often more serviceable, in certain forms of indigestion, than a continued abode in any one locality. Equestrian exercise, in a country like Spain or Portugal (he might have added Greece and Syria), where it is the custom to travel on horseback, is recommended as one of the best means of acquiring a stock of rude health. Of this we ourselves have had practical experience, as well as of the harmless assaults of a certain active insect which seems never to sleep.

Dr. Francis gives but a very short notice of Gibraltar, and

in our opinion has hardly stated its full claims upon British invalids. True, the Rock itself possesses few attractions for such as are averse to confinement, but the neighbourhood of Algeciras and San Roque will, for a change, satisfy most; or if the wanderer chooses to cross the Straits, he is in a few hours conveyed to a country of surpassing interest, the opposite coast of Barbary, where he can have comfortable accommodation at Tangiers, and at the same time, while here enjoying the genial warmth of an African climate, have an opportunity of remarking the manners and customs of an uncivilized race of white men, the Moors, and of contrasting them with their dark brethren of the desert, the Bedouin Arabs.

The author has devoted two chapters to the consideration of the climate of Malaga and its environs; but as we have so fully noticed Dr. Martinez' able work upon that subject, we can afford to be brief here. He states,—"There is no place in Spain, nor in the whole of Europe, so far as our present information goes, that possesses a climate at once so mild and equable, with so little variation from day to day, and from day to night, as Malaga." In these respects it is superior to the climate of Egypt, which, we think, ought to rank first, were it not for the striking variations of temperature between day and night, which all voyagers upon the Nile must have frequently experienced, and invalids, no doubt, on many occasions have suffered from.

The mean daily range of temperature at Malaga is only 4·1°; the mean winter temperature Dr. Francis gives at 54° 41′; the mean annual range of temperature is 49°.

Mr. Mark, the British Consul at Malaga, bears testimony to the healthy condition of the town, notwithstanding the disadvantages of a crowded, poor population and a great deal of misery. "The salubrity of Malaga," he says, "is surprising and scarcely credible; sometimes two or three days pass without a single death throughout the city." The mortality appears to be unusually large, nevertheless, in infancy and childhood, partly owing to the abandonment of infants by their mothers, a practice general throughout the Peninsula. "Thus we find that in Malaga 23·4 per cent. of the population die during the first year of life, and 42·3 per cent. during the first five years." On the other hand, the longevity of the people is remarkable after attaining maturity. "Persons of from eighty to ninety years of age may be seen going about the streets with the full use of their faculties."

Dr. Francis closes a glowing account of Malaga with a short notice of Torre Molinas, a little village about two leagues

west of Malaga, remarkable for the salubrity and invigorating character of its climate. He also notices Alhaurin and Ronda as cool retreats for the invalid during the summer months. The latter is four thousand feet above the level of the sea, and, if we are to believe a Spanish proverb, the most healthy situation in the world:—"En Ronda los hombres de ochenta años son pollones"[a].

The second part of the book is devoted to an account of particular climates. He first offers some general remarks on the climate of the Peninsula, considered as a whole, then divides the different climates into the littoral and those of the interior, taking each seriatim, and giving in detail what information, experience, and statistics, he was enabled to obtain whilst resident in the country. Describing the climate of the south-eastern coast, he observes: "The air is decidedly dry, especially in the centre, about Alicante and Valencia, where the land, unless artificially watered, is in many parts barren. More of humidity occurs as we approach the Straits of Gibraltar, on the one hand, and the French frontier on the other." Under the head of Madrid we read the following just condemnation: "It is unhealthy; and to invalids, unless the greatest care is taken, even dangerous." This is explained by the peculiar situation of the town, in the midst of an arid plain, elevated 2113 English feet above the sea, and exposed to the icy blasts which descend from the snowy crests of the Guadaramma range, not many leagues distant to the north of the city, without any intervening forests to temper and break their violence. With this fact before us, it does not require statistics to prove the ungenial character of its climate; with the latter, however, he has furnished us liberally; nor need we have been told "that the duration of life is short." The following hint, however, may be useful to any who are compelled to reside there, and wish to avoid pneumonia or a colic: "Flannel, voluminous enough to cover the abdomen, as well as the chest, should be worn in all seasons." The neighbouring resorts of Aranjuez, La Granja, and the Escurial, are touched upon, and their several merits, as places of retreat from Madrid, allotted to each.

The description of Lisbon, and the delightful neighbourhood of Cintra, occupies a full chapter, in which we find an interesting account of that loathsome disease, leprosy, which would appear to be more commonly met with in the capital of Portugal than in any other city of the Peninsula. Its climate is described as inconstant, and fluctuating between the extremes

[a] "At eighty years old the men in Ronda are still chickens."

of dryness and moisture; the change of temperature, too, being often sudden as well as remarkable.

An account of Seville and its attractions occupies another chapter. As a winter residence for invalids it is decidedly inferior to Malaga, but the spring months are delightful; our own recollection of the balmy, soft air enjoyed by us in the month of March, 1852, will never be effaced from our memory.

Cadiz is next considered, and its peculiar situation and other points of practical importance brought under our notice. The longevity of its inhabitants being conclusively proved from a Table of mortality for seven years, which includes no less than forty-three centenarians. "The mean annual temperature of Cadiz is 62·75, being two degrees warmer than Rome and Pisa, six than Pau, and one than Naples, but colder than Madeira by two, and than Malaga by nearly four degrees." The average number of rainy days for the year is 99. In cases of dry asthma, and in organic affections of the heart accompanied by dyspnœa, the climate of Cadiz is worthy of a trial. Granada and Cordova may be reached also from Malaga, and when visited at a proper season will not only afford objects of great interest, but their climates may be conducive of health in certain forms of dyspepsia, &c. "The summers of Granada are very hot, and the winters cold; but the spring climate is delicious."

The winter climates of Almeria, Carthagena, and Alicante, are severally described; the latter, as the driest to be found in Europe. The author states, that "Alicante offers advantages, as a place of residence for persons with delicate chests, far superior to those of many of the places at present resorted to for that purpose."

The climate of Valencia, next treated of, is subject to some disadvantages, from which those last described are exempt, for instance, the plain is now extensively irrigated for the cultivation of rice, rendering the surrounding atmosphere more or less humid,—therefore it is not recommended so highly for phthisis, but some forms of bronchitis may be benefited by a residence there during the winter months. "The mean annual temperature is 63·5°; that of winter 49·7°; of spring 60·7°; of summer 78·8°; of autumn 65·7°. These numbers may be advantageously compared with those of many other places of winter resort."

Barcelona possesses some claims as a temporary residence for invalids, but should be avoided when there is a tendency to irritation or inflammation. Rain falls on sixty-nine days, rather a high average as compared with other localities on the

east coast of Spain, probably owing to its proximity to the Pyrenees.

The climates of the north coast of Spain are next described, but as they appear to be little removed in character from that of the south of England, they do not require any special notice from us.

An accurate account of the climate of Algiers was much to be desired, and we have not been disappointed in Dr. Francis' chapter on it; he informs us that—

> "The mean annual temperature of Algiers is 64°, nearly identical with that of Madeira, but lower than that of Malaga. January is the coldest, August the hottest month. Rain falls on fifty-seven days and fifty nights in the year: the annual quantity is thirty-seven inches. Sometimes the rain is very heavy, and occasionally lasts for thirty-six hours at a time. Fogs, so dense as sometimes to render navigation dangerous, occasionally form at Algiers and on the coast country generally; but this happens almost exclusively during the summer."

According to the investigations of French physicians, Algiers would seem to enjoy an extraordinary immunity from consumption; they have come to the conclusion, that it is an extremely rare disease in that tract of Algeria which lies between the sea and the mountains: and amongst the indigenous population its occurrence is wholly exceptional. From reports furnished by them, out of 622 cases of disease, one is calculated to arise from consumption, and in every seventy-five deaths one only is due to this disease;—a striking difference between these statistics and the average number of deaths from consumption in London and Paris, being, in the latter, not less than one in five.

Dr. Francis concludes his excellent little work with an Appendix on the mineral waters of the Pyrenees. Amongst the most celebrated of these we notice the sulphurous waters of Vernet, which are recommended, and are particularly applicable to chronic affections of the chest accompanied by copious secretion, and to non-inflammatory vesical catarrh. Two large hotels have been fitted up by French officers for the treatment of invalids, with every attention to comfort. "The staircases, corridors, dining-rooms, and the passages leading from the sleeping-rooms to the baths, are all maintained constantly at the same equable temperature, from 59° to 64°."

We now close our notice of this practical volume, and strongly recommend its perusal to all who are interested in the subject of climate. We have only to regret that its author had

not an opportunity of investigating the real merits of the climates of Egypt and the coasts of Syria, as we are convinced, from a personal observation acquired some years back, that they are well worthy the investigation of a careful and painstaking observer such as we have proof abundant in the volume before us Dr. Francis is.

The work of Dr. Burgess on the Climate of Italy requires but a very short notice from us. We have perused it without gleaning a single new fact of the slightest practical importance. That Devonshire and the Isle of Wight possess many claims upon British invalids for a winter retreat, no educated physician would for a moment dispute, but these claims have been fairly and sufficiently asserted in the several editions of the valuable monograph upon Climate of Sir James Clarke, as have also the true relative merits of the climates of Provence and of Italy. Not so, however, thinks Dr. Burgess; who, after a few months' *uncomfortable* travelling in the south of France and Italy, comes home, and writes a book full of prejudice, endeavouring to persuade invalids to stay at home; as, according to his views, all foreign climates are cheats, "experience" having taught him that both discomfort and disappointment are the rule of the day abroad.

Homœopathy: its Tenets and Tendencies, Theoretical, Theological, and Therapeutical. By J. Y. SIMPSON, M. D., F.R.S.E., &c. Third Edition. Edinburgh: Sutherland and Knox. 1853. 8vo, pp. 292.

OUR readers must long ere this have perceived how rarely we have noticed, or even referred to, the popular quackeries of the day. In all ages and at all times since medicine was converted into a science by the Old Man of Cos, attempts have been made by the ignorant and the uninstructed to reduce its practice to the level of the mind of the masses of the people, or to substitute an universal panacea for the many and varied therapeutical resources which the accumulated skill and experience of centuries have placed at the disposal of the educated physician. We should not, then, be surprised, or take it too much to heart, that empiricism abounds now as ever, and that new systems of quackery, each, mayhap, more foolish than the preceding, are continuously being *invented*. It is true that the public requires from the legitimate practitioner an exposition

from time to time of these knaveries, and the folly or absurdity of the so-called doctrines on which they are said to be based; yet such exposure, we conceive, is out of place in the pages of a Journal devoted to the profession, where, if admitted, it must find room, to the exclusion, in this busy age of advancement, of the record of some medical fact, or of the notice of a novel idea, or of an improved view in some of the many departments of our art. Moreover, as the evil passions which sway mankind, and the follies and knaveries of life, often take deepest root the more they are attempted to be exposed,—thriving, as it were like ill weeds, on abuse,—so we have often remarked the most nonsensical systems of quackery—foremost amongst which we would place homœopathy—to take the firmer hold on the mind of the vulgar and acquire the greater prominence, the more they are made a subject of animadversion by the medical writer. The slight extent, comparatively speaking, to which quackery has spread in our metropolis and in Ireland generally, is, we have often thought, to be ascribed to the little notice *we* take of it; and, consequently, we do not purpose departing from the rule we have laid down for ourselves—treating empiricism, be it new-fangled or old-fashioned, with silent contempt, and allowing it to find its level without artificial aid from us. While, however, we deprecate the showing up of quackery in periodicals like ours, devoted solely to the literature of medicine, we do not at all object to the publication of *medico-popular* books or essays, written to expose these impostures; and when the arguments contained therein are, as in the volume now before us, ably conceived and clearly put forth, their use is manifestly great, provided *the public* can be induced to study them.

Professor Simpson's book, though called a third edition, must be regarded as a new work, considering the amplification which it has undergone, and the new arguments which have been introduced. For the reasons given above, we have no intention either of analyzing or reviewing it; we merely indicate it to our readers as containing the most *philosophic* exposure of homœopathy in the English, or indeed in any other language, and consequently, as best adapted for furnishing them with materials to combat the specious reasonings occasionally put forward by its professors or its dupes.

A Treatise on Auscultation and Percussion. By Dr. Joseph Skoda. Translated from the fourth edition, by W. O. Markham, M.D., Assistant Physician to St. Mary's Hospital. London: Highley and Son. 1853. Post 8vo, pp. 346.

The name of Professor Skoda, as an original discoverer in the rich mine of thoracic diagnosis, has been for some time familar to us in these countries. His work, however, on auscultation and percussion has been hitherto unknown to the greater proportion of our medical readers, a few only of the younger or more zealous having the courage to attempt to master the abstruse and novel theories of the author in the obscurity of a foreign language. It is certainly not a little singular, and has been no doubt tantalizing, that a treatise of such value should have remained so long inaccessible to the English student, more than fourteen years having elapsed since the publication of the first edition at Vienna. From time to time we have heard of a translation being in progress, and even the names of translators have been mentioned, but, with the exception of a valuable analysis of Dr. Skoda's researches made by Drs. Drysdale and Russell with the oversight of the professor himself, published in the Edinburgh Medical and Surgical Journal for 1841, and the recent publication of Dr. Herbert Davies of London, we have had no authentic account of Skoda's researches. We are rejoiced to find that this strange anomaly exists no longer. A work of such original thought is worthy to receive the national franchise, and deserves a place in our Anglican literature, even though all the rectifications proposed by the author in the theories of auscultation and percussion may not be tenable. We can only account for the delay which has occurred in the translation of the labours of the illustrious German to the prejudice which exists against any attempt to impugn the authority of Laennec. The doctrines of the great discoverer of auscultation have had the sanction of time and early inculcation, and have been long admitted as truths which it would be medical heresy even to question. Skoda's appeal to us, like that of the noble Athenian of old, is, "Strike, but hear." All he requires of us is to give his objections to several of the received doctrines a due consideration, and, if they should be borne out by observation and experiment, no longer to cling to error because it may be sanctioned by authority.

The treatise on auscultation and percussion now presented in English by Dr. Markham is translated from the fourth German edition, and, therefore, comes before us with the advantage

of the long and tried experience of the author. It bears the impress of an inquirer who evidently desires to think for himself. He avows himself openly as an agitator for stethoscopic reform, and ambitiously enters the lists ready to meet all opponents. He generally brings pathological observation or direct experiment to bear against the theories which he attacks, but sometimes rejects them, without any more conclusive reason than his own opinion, "Stat pro ratione voluntas." We feel at times disposed to be a little angry with him for the *brusquerie* with which he dismisses the conclusions of Laennec, Andral, Piorry, Stokes, Williams, and other masters of the art, and to be amused with the spirit of combativeness which he shows towards some of his countrymen who dispute his views. But a few examples of personal ovation occurring among a great deal that is truly valuable, we can readily admit as instances of the "eccentricities of genius," and of that laudable desire to discover truth, and to profess it when discovered, or imagined to be so, at all hazards, though, like the fate of all reformers of error, the knocks administered may produce disagreeable results.

The volume is divided into two parts. The first contains a description of the phenomena observable by the aid of auscultation and percussion, and the second, the application of these phenomena to special conditions of the thoracic and abdominal cavities. Neither of these divisions can be regarded as complete treatises upon their subjects; they are, as the translator has well observed, "more of a suggestive character" than a hand-book of details; and he states that he felt so impressed with this, "that he once had an idea of attempting to fill up what he believed was wanting, with the hope of rendering the book more complete for the hands of the student; but, upon reflection, thought it better that the work should retain its original form." We are of opinion that Dr. Markham has evinced much judgment in thus resisting that dangerous temptation, into which so many translators fall, of *improving* the original, and in giving us the work without note or comment. Skoda comes before the public not as the compiler of a manual "for the use of students," for which purpose, from the obscurity of his style, his book is but little adapted, but as a skilful gladiator attacking the existing theory of auscultation at every undefended point. The propositions he puts forward frequently come before us in a polemical shape, unfitted for beginners in auscultation: often, indeed, difficult to be understood even by the more advanced student. Besides, many of his positions are new and startling, and demand the experiments on which

they rest to be carefully repeated. They raise doubts which require to be sifted to separate the chaff from the corn, a work of experience and time. We shall endeavour, in placing some of the writer's views before our readers, to divest our minds of any preconceived prejudice in favour of the opinions they question, and to give a short notice of a few of the salient points to be found in his work.

The first part of his volume is subdivided into four chapters,—the first being appropriated to percussion; the remaining three to auscultation, both in a general view and in a particular application to the organs of respiration and circulation. In his principles of percussion he appears to us to deviate from the simplicity of plan which he proposes to himself in auscultation. In the latter, he seeks to get rid of a number of minute distinctions, which he thinks have injuriously incumbered the art, and tries to reduce the minute subdivisions of the French school to fewer heads. In his chapter on percussion he has, on the contrary, amplified the table of sounds, so that it may be objected to his theory that it is very artificial, and, even if well founded, scarcely applicable to practice. Thus he observes, that—

"The various percussion sounds of the thorax and abdomen cannot be arranged together in one class, comprising every degree of sound: it is necessary to distinguish four principal varieties; the extremes of these varieties, between which there are numerous gradations, may be represented by the following terms:—

1. Full—Empty.
2. Clear—Dull.
3. Tympanitic—Non-tympanitic.
4. High—Low.

A full percussion sound may be clear or dull, tympanitic or non-tympanitic, high or low; and the same is true as regards an empty sound."

Before offering any comment upon the preceding division, we would remark, that the nomenclature of percussion is very defective, chiefly from the want of suitable expressions to describe sounds, in perhaps most languages. Thus the terms in use to distinguish the varieties of sound are borrowed,—some from the other senses: for instance, the epithets *clear* and *obscure*, from vision;—and some from magnitudes, whose characteristics of depth, breadth, and fulness, are transferred to properties of sound. Thus we use the expressions depth of tone, breadth of voice, fulness of sound, to denote various de-

grees of volume and intensity in the phenomena of the sounding body. It is one of the inconsistencies of language that these expressions have become familiar from habit; while their opposites,—such as shallowness, narrowness, and emptiness,—would jar strangely on our ears if so applied. From this difficulty of finding suitable terms to express gradations of sound, writers on percussion have confined themselves hitherto to the single division of sounds into the clear and the dull,—distinguishing by adjuncts the several degrees, from the highest clearness, amounting to tympanitic resonance, to its total absence, as denoted by femoral percussion. The possibility of illustrating these degrees by certain sensible sounds, so as to have thereby a standard of comparison, was advocated by Piorry, who conceived that each organ had a peculiar intonation when struck, and which was capable of assimilation to the sounds elicited in abnormal conditions of other organs. Thus he established a set of standard sounds, such as stomach-sounds, liver-sounds, spleen-sounds, bone-sounds, and so on. Against this unphilosophical, as well as unpractical, division our author justly raises his voice; and shows that the parenchyma of all organs not containing air, except membrane in a state of tension, gives forth the same sound, and that the varieties of sound heard on percussion of the lungs, the stomach, and intestines, depend solely upon the air contained in them. But though, as we have observed, the terms 'clear' and 'dull' have, for want of better, been employed by stethoscopists, they were felt insufficient to convey a notion of the cause of the clearness or dulness, whether existing beneath the part percussed or in that part itself. For instance: a clear sound implied not only that air existed beneath the spot, in quantity varying generally according to the degree of clearness elicited, but that the walls of the chest were in a favourable state for becoming good conducting media; otherwise, the amount of air in the chests of two individuals being the same, the clearness of tone would differ according as the elasticity of the thoracic investments was affected by muscular tension, fat, œdema, or other causes. These two conditions, which have been recognised and commented on in most treatises on the subject, Professor Skoda now proposes to designate by distinct names,—applying the terms fulness and emptiness to the amount of air in the parts beneath, and clearness and dulness to the elastic or inelastic state of the medium, viz.: the thoracic walls. It is plain that if this division could always be adopted in practice, it would impart a greater precision to our diagnosis; but it is not free

from objection. According to him, fulness of sound, and not strength of sound, is a measure of the magnitude of bodies:—

"We do not judge of the size of a resonant body by the strength of the sound which strikes upon the ear,—the slightest vibration of a large bell tells us of its magnitude, the loudest ringing of a little bell misleads no one as to its smallness,—neither do we judge of the dimensions of a body by the pitch of their sounds."

Hence, to produce a full sound, or a sound of considerable volume, there must be a proportionately large sounding body yielding it:—

"A full sound, produced by percussion of the thorax or abdomen, indicates the existence of air beneath through a space of at least several inches in extent in every direction. A thoroughly empty sound, resembling the percussion sound of the thigh, shows that there is neither air nor any other gaseous body beneath the percussed spot, but that solid, fleshy bodies or fluids are present there."

It may be objected to the author's application of the terms fulness and emptiness to sounds, that popular usage has affixed to them a reverse signification, as indicative of the contents of the sounding body. Thus an empty sound, or the sound of emptiness, is always popularly connected with the presence, and not the absence, of air; while the sound of fulness, or a full sound, implies that the body struck contains solid or liquid matters. It is true, that an author is allowed to use words in certain cases out of their ordinary meaning, but the confusion thereby introduced makes such a proceeding inadvisable.

It is evident, and indeed is admitted by the author, that various causes render the application of the term fulness of sound, and its opposite, inaccurate measures of the size of the lungs, the condition of the walls of the chest so greatly modifying the amount of fulness:—"It is only when the most marked differences exist between the full and the empty sound that certain conclusions can be drawn."

In his second class of sounds, the clear and the dull, the author observes that these words are taken by him in their usual significance. They are used by him as solely applicable to the state of the parietes. You can imitate the sound of a flabby chest by covering a drum with cloth—the sound becomes muffled; in the same way we find the percussion sound of the walls of the thorax clear in proportion as they are thin and elastic. The difficulty which most physicians experience in deciding how far the defect of resonance is due to the lung,

and how much to the unyielding walls, is endeavoured to be remedied by the author. He is of opinion, that by combining his first and second classes of varieties of sounds,—such as full and clear, full and dull, empty and clear, empty and dull,—we can supply every indication.

Some of these combinations he gives:—

"When air is present beneath a thin and elastic portion of the thoracic walls, through a space about an inch in breadth, and not more than a few lines deep, and the remainder of the thoracic cavity is filled with fluid or consolidated lung-parenchyma, the percussion sound over that portion will be perfectly clear, but empty."

Our readers may probably be of opinion that this is a refinement in percussion which it is difficult to conceive would be likely to occur, and of little value if it did. The clearness Skoda evidently considers due to the walls, and not to the air in the small portion of the subjacent lung, though some contradiction appears to exist between this case and his definition of an empty sound, as "that in which *no* air exists beneath the percussed spot."

Again, a full and dull sound may, according to him, be thus produced:—

"A portion of lung, situated immediately beneath the thoracic wall, which has a surface not less in circumference than a pleximeter, and half an inch of thickness, will yield a full but quickly muffled percussion sound if it be deprived of air, whilst the rest of the thorax is filled with the normally distended lung."

Why the dulness should proceed from the thoracic wall in this case, and not from the airless portion of lung beneath it, may naturally be asked.

The remaining combinations of full and clear, and empty and dull, present no difficulty: the former denotes a large amount of air in a well-formed and elastic thorax; the latter is represented by the thigh-percussion sound,—a completely dull and a completely empty sound having naturally the same signification.

Skoda's third class of sounds comprises the tympanitic and the non-tympanitic. Hitherto we have been accustomed to regard tympanitic sounds as exaggerated states of clearness, rather than as constituting a division in themselves. Our author thinks them distinct enough to form a class. The converse of them, however, under the appellation of non-tympanitic, being simply a negation of tympanitic, must necessarily be very vague, and capable of being applied to any sound that

has no tympanitic resonance. To fix it more definitely, however, he tells us it is the sound of the normal lung:—

"The non-tympanitic is represented by the sound which percussion produces at those parts of the thorax beneath which lies healthy lung normally distended by air."

We cannot, therefore, call it a *variety* of sound, such as he assumes in his classification: it is his means of defining, in a lung in which a tympanitic sound occurs, the boundaries of the latter. Thus, in a partial emphysema, the tympanitic resonance becomes more evident from the contrast than when the whole organ is emphysematous.

Dr. Skoda has given the weight of his sanction to the curious fact frequently noticed, that a lung may yield a tympanitic sound even if it contains less than its normal quantity of air; and that "when the lung is much reduced in volume by compression, but still contains air, its sound is invariably tympanitic." To give this proposition greater importance he puts it in italics:—

"*That the lungs partially deprived of air should yield a tympanitic, and, when the quantity of air in them is increased, a non-tympanitic sound, appears opposed to the laws of physics. The fact, however, is certain, and is corroborated both by experiments on the dead body, and also by this constant phenomenon, viz., that when the lower portion of a lung is entirely compressed by any pleuritic effusion, and its upper portion reduced in volume, the percussion sound at the upper part of the thorax is distinctly tympanitic.*"

That a similar tympanitic tone may be produced from a large effusion distending the pericardium, and compressing the left lung against the thoracic walls, was first noticed by the late Dr. Graves[a], who explained it as thus fulfilling two conditions, viz., tension of the thoracic walls, and close application of the lung to them. According to our author, however, great tension of the parietes of an organ produces an opposite result; thus a stomach gently inflated, and yielding a tympanitic sound, will lose its resonance by strong inflation. The same, according to him, occurs in pneumothorax when the walls of the thorax are much distended: hence he announces, as a general proposition, that—

"The percussion sound is invariably tympanitic when the parietes of the organ which contains the air are not stretched, but that, on the contrary, when they are firmly stretched, the percussion sound becomes less, or not at all tympanitic, and even dull."

[a] Clinical Lectures, by Neligan, vol. ii. p. 179.

Pressure against the thorax he considers insufficient to produce it:

"A healthy lung, strongly inflated within the thorax so as to be made to press against its walls, gives a full, clear, but non-tympanitic sound at every part where it comes in contact with the walls."

Apposition, however, without pressure, he admits:

"If water be thrown into the pleura, the percussion sound is clear, and either approaches the tympanitic, or is distinctly tympanitic at every point at which the lung touches the walls of the thorax."

The explanation offered by Dr. Williams of a tympanitic tone, elicited from a compressed lung, is objected to by Skoda as being disproved by direct experiments. Dr. Williams conceives that the reason the larger branches of the bronchial tubes do not emit on percussion a sound like the trachea is, that they lie deep, and are covered by porous lung which stifles the sound. When this portion of lung is condensed by compression or hepatization, it becomes, like the tracheal wall, a ready conductor of the sound of the closely applied bronchial tube. It is not so frequently met with as may be expected, because the consolidation is seldom sufficiently complete.

Having discarded all other interpretations, he gives us his own, which is as follows. To produce a tympanitic sound which resembles a tone, and the non-tympanitic rather a murmur, a greater homogeneity of vibrations is necessary; hence, if the parietes of the air-containing organ be not stretched, their vibrations do not interfere with the vibrations of the contained air, so that it is the air alone within the organ which produces the sound; but if, on the contrary, the parietes be distended, the vibrations arising from two bodies not homogeneous, viz., the strained investment and the air inclosed, interfere with each other, and the waves of sound, having different degrees of velocity, cross and to a certain degree neutralize each other. A somewhat different explanation has been proposed by Savart, viz., that the distended medium cannot *receive* vibrations from the subjacent air, on the principle that vibrations can be excited in a membrane only in an inverse ratio to its degree of tension. Thus a stomach when slack sounds tympanitic, because no sonorous vibrations can be excited in its walls.

Our readers must now perceive that Professor Skoda has devoted considerable attention to this subject. The reasons he assigns, supported also by experiments, appear to possess considerable probability. Still it is difficult to believe that in pneu-

mothorax and emphysema, in which the thoracic walls are protruded by pressure from within, and then placed in a high degree of tension, tympanitic resonance does not occur according to Skoda's hypothesis except on a remission of tension. The subject seems to require a further investigation.

We need not dwell on his fourth division of percussion sounds, viz., the high and low. They are unnecessary in practice, and, therefore, uselessly incumber a subject, the practical advantage of which consists in its simplicity and readiness of application. His explanation of the other percussion sounds need not detain us. We shall only observe, that Piorry's "water-sound," *son humorique*, the metallic ringing sound, does not, as Piorry supposed, according to our author, necessarily require the presence of water to produce it.

It is time for us now to proceed to give a brief summary of our author's views on auscultation, and especially on his theory of *consonance*, upon which most of his observations are based. It is due to him, as his fame as a deep thinker is so closely connected with this subject, to present our readers with as clear an outline of it as we are able.

The theory of bronchophony, propounded in works on auscultation, has been, with little modification, that of Laennec. This writer has endeavoured to explain why the voice is scarcely at all perceptible in the bronchi distributed through the lungs, when these organs are healthy. He assigns three causes for this: first, "that the loose texture of the lungs, rendered still more rare by its intermixture with air, is a bad conductor of sound;" secondly, "that the softness of the bronchial branches after they cease to be cartilaginous renders them very unfit for its production;" and thirdly, "that the smallness of their caliber must render whatever sound is produced in them more acute and weaker than in the larger trunks." "But," continues Laennec, "if any one of these adverse conditions is removed, and yet more, if several of them are so at the same time, the sound of the voice may become perceptible in the smaller bronchial tubes." When so occurring, he designated this state "accidental bronchophony," as arising from causes of casual occurrence.

In opposition to this exposition of Laennec, Skoda holds, that variations in the strength and clearness of the thoracic voice cannot be explained by differences in the sound-conducting power of normal and abnormal lung-parenchyma.

To show that Laennec's theory is insufficient, he lays down a postulate dependent on a circumstance which every one, he says, who has had much experience in pneumonia must have

observed,—viz., that in hepatization of the lung, bronchophony disappears and re-appears several times in the course of a few minutes, "without any alteration discoverable by percussion or other means having taken place in the condition of the hepatized part." When we try to discover the cause of these successions of exaggeration and diminution in the loudness of the voice, we find that bronchophony disappears while the patient remains tranquil, neither coughing nor expectorating, but returns after a deep-drawn breath, and still more readily when the patient coughs.

"The conclusion," argues the author, "to be drawn from this is, that the voice is heard through the hepatized parts when the bronchial tubes are not obliterated by fluids, but contain air, and that, on the other hand, it disappears when the tubes are blocked up by mucus or other fluids."

Now, as Skoda naturally asks, if the voice sound was conducted by the walls of the bronchus, why should the obstruction of the tubes prevent its being audible; the same conditions exist at one time as at another, and it would be a matter of indifference whether the bronchial tubes contained air or liquid matter; we must, therefore, look for some cause more rational and persistent than the sound-conducting power of the lung. This cause he finds in the air contained in the bronchial tubes, through the medium of which he considers the voice to pass into the parenchyma of the lungs. So far from the solidification of the lung assisting the conveyance of sound, he tries to prove that in proportion to the solidity of a body is the difficulty of the passage of sound from the air into it, in consequence of the loss sustained from the great reflection which sound undergoes when it passes through media so vastly different in density as air and solidified lung. Dense bodies, such as a beam of timber, or water, readily transmit sound when the ear is placed in *contact* with them, but when a rarer medium, such as air, is interposed, the sound spreads in every direction, and much of it is lost. He even goes farther, and asserts that the voice passes more readily from the air of the air-cells and tubes into the parenchyma of a healthy lung than it does from the air of the large bronchial tubes into the consolidated tissue of a hepatized lung. For this cause he rejects the notion of Laennec, that bronchophony is explicable on the ground of the superior conducting power of a consolidated lung, such a state rather impeding than augmenting the sonoriety, according to his views.

In seeking for some better explanation our author was

struck with the fact that bronchophony is often heard as distinctly at a point *remote* from the part where it originated as at that part itself, nay more, it is sometimes heard louder at a distance from its origin than at it. The first condition may be explained by causes preventing its diffusion, so as to keep it concentrated, but this will not account for its *increased* loudness; as no conduction of sound can increase its loudness, it must have gained its augmented strength by consonance alone:

"Consonance is a well-known phenomenon. A guitar string yields a musical note when a similar note is sounded upon another instrument in its neighbourhood, or even by the human voice. A tuning-fork held in the air sounds much more feebly than when laid on a table; the table strengthens the tone and yields similar vibrations, and thus consonates with the tuning-fork."

"The sound of a Jew's-harp is scarcely heard in the open air, but becomes distinctly audible when made to vibrate within the mouth—its sound is strengthened in consequence of the air in the mouth consonating with its vibrations."

The theory of consonance requires a more extended description than our author thus gives of it, and we shall add a few remarks which may illustrate his views. That cavities reinforce the sound produced in them by reverberation from their walls is well known. It has also been observed that when a person speaks or sings near the opening of a wide-mouthed vessel, some note of the voice is greatly augmented by reason of its being in unison with the air in the cavity. The conditions to be fulfilled are, that the vibrating body be placed opposite to the orifice of the vessel, and be large enough to set a considerable amount of the adjacent air in motion. When this occurs, the sound of the vibrating body being in unison with the natural note of the cavity, consonates with it and receives an increase of strength. In this case the sound is alternately reflected by the bottom of the cavity and the undulating body at its mouth, so that the first impulse, after undergoing a double reflection from both of these, combines with the second new impulse, and reinforces it. The same process is repeated at each new impulse,—each conspires with its echoes to augment the sound considerably. This resonance or consonance has been illustrated by Professor Wheatstone in a very interesting manner: "If one of the branches," he states, "of a vibrating tuning-fork be brought near the embouchure of a flute, the lateral apertures of which are stopped so as to render it capable of producing the same sound as the fork, the feeble and scarcely audible sound of the fork will be augmented by the rich reso-

nance of the column of air within the flute, and the tone will be full and clear. The sound will be found greatly to decrease by closing or opening another aperture, for the alteration in the length of the column of air renders it no longer fit to reciprocate the sound of the flute."

Having laid down the principle of consonance, our author thus proceeds to apply it to explain the thoracic voice. When a person speaks, the voice is produced by certain vibrations of the vocal chords in the larynx, which are communicated to the air in the throat, the mouth, and the nasal cavities, which consonate with the laryngeal sounds. That this is the case "we learn from the changes which the voice undergoes by opening and closing the mouth or the nose, while the condition of the larynx remains unaltered." Every one has observed the disagreeable nasal intonation which the voice acquires when the nostrils are stopped, and which is popularly but erroneously termed "speaking through the nose." Now, argues the author, as in the upper passages, the air in them consonates with the sound formed in the larynx, so in the lower passages, viz., the trachea and bronchial tubes, it is the air in them and not the parenchyma of the lungs which is the consonating body, the parenchyma being ill adapted for consonance, as being neither firm nor tense in structure. But air does not consonate except when confined; e. g., a musical instrument does not sound as loudly in the open air, where it is diffused, as in a close room, and the force of the consonance depends upon the form and size of the enclosed space, and upon the nature of the walls forming it. A space bounded by solid walls yields the loudest consonance from the complete reflection of the sound. It is popularly known that tents, or rooms hung with tapestry or curtains, damp the sound, while the voice reverberates powerfully from the metallic walls of the speaking-trumpet. It must not be supposed, however, that the air confined in a given space consonates with every sound in an equal degree; it will be found that all the sounds produced in it do not consonate with equal force and clearness. "Consonating bodies only respond to those tones which they themselves are able to produce, or to vibrations forming some aliquot part of such tones."

The author next proceeds to show the effect which the structures of the trachea, the bronchi, and the parenchyma of the lung exercise on consonance, and he concludes that the cartilaginous formation of the trachea and bronchi places them in a condition for reflecting sound analogous to the upper passages, so that the sound is nearly as loud in the trachea as the larynx. But it is different when the bronchial subdivisions lose

their cartilaginous structure, and become thin membranous canals. These damp the sound, like the yielding walls of a tent, instead of reflecting it, thus weakening the vocal consonance. But should these yielding membranous walls acquire an artificial solidity, either from a denser condition of their own structure or a resisting background formed by consolidated lung, they present the necessary condition for reflecting the vocal vibrations, when the communication with the air in the larynx is uninterrupted. These vibrations are perceived by the ear applied to the thoracic parietes, or by the stethoscope, by means of the walls which surround the air vibrating in unison with the consonance of the voice within them, and these vibrations may be so strong as to pass through several inches of thick fleshy parts, or of fluid.

Such is Skoda's theory of consonance; and he next proceeds to consider those diseased conditions of the respiratory organs which produce an increase in strength or clearness of the thoracic voice. Of these he recognises three classes, viz., 1. Diseases depriving the lung-parenchyma of air, and rendering it firm, dense, and solid; 2. Diseases depriving the parenchyma of air by external compression; and—3. Hypertrophy of the cartilages of the bronchial tubes within the lungs. In the first class he enumerates pneumonia, tubercular infiltration, and pulmonary apoplexy; and states that in these, two conditions must be fulfilled to produce increased loudness of the voice, viz., total, or nearly total, expulsion of air from the air-cells; and a large tube within the solidified part whose walls are capable of resisting compression, and containing air which freely communicates with the larynx. He denies that solitary tubercles, if the intervening parenchyma remains pervious to air, produce it, or lobular pneumonia, except to a slight amount. He totally rejects the opinion of Williams and Raciborsky that it can exist in a high degree of pulmonary congestion.

Among diseases which produce the thoracic voice, by compressing the lung tissue, he enumerates pneumothorax, pleuritic and pericardial effusions, tumours, aortic aneurisms, enlargements of the heart and abdominal viscera, and deformities of the thorax. The chief of these are pleuritic effusions and pneumothorax, as affording a compression more complete, and of a larger amount of lung. In other cases of compression from without, the air is seldom completely excluded from the compressed portion of the lung,—thus rendering the thoracic voice less certain. As to the amount of fluid or gas requisite to produce such a degree of compression as to give rise to the thoracic voice, it is difficult to decide, as it depends on the state

of the lung and the capacity of the thorax,—a few ounces in one case, and at another several pints being necessary.

He assigns as a reason why compression of the lower lobes of the lung more frequently gives rise to the thoracic voice than the upper, that the bronchial tubes of the compressed portion of the lower lobe are reduced in size, but not obliterated,—whereas they are more readily obliterated in the upper parts because of the curved course they follow. He does not determine the distance of a bronchial tube from the surface of the thorax necessary to produce consonance, but he thinks it may be considerable: an increase of voice is seldom audible in circumscribed effusion.

Of diseased states fulfilling his third condition, viz., enlargement of the bronchi and cavities in the lungs, they do not cause an increase of voice unless their walls reflect sound, and are infiltrated, thickened, and deprived of air, through a depth of several lines. For the experiments in support of the above views we must refer our readers to the volume itself.

We shall say but a few words on the application of these principles of the author to the varieties of the thoracic voice, as our limits warn us to conclude.

It is well known that Laennec considered the resonance from a cavity to be different from the resonance in a bronchial tube, surrounded by consolidated lung, and that he gave the name of pectoriloquy to the former sign, regarding its presence as pathognomonic of pulmonary caverns. Laennec relied a good deal on the value of pectoriloquy, but he could not, however prejudiced in its favour, remain insensible to its very variable character; and as he could not find it to exist in a perfect form in all case of cavities, he endeavoured to give it a certain value by admitting degrees of it, and correcting its indications, when doubtful, by collateral circumstances aiding the diagnosis, such as the circumscribed nature of the sound itself, and the concurrent indications of cavities afforded by the cough, the rales, and the respiration. But the very degrees of it made by Laennec into perfect, imperfect, and doubtful, without any pathological condition peculiar to each, only increased the uncertainty of the sign, showing that it was liable to fallacy. Subsequent writers admit that, taken alone, it is one of the least certain in phthisis, sounds in every way resembling it having been found to exist even in normal conditions of the lung. Laennec himself could find no satisfactory difference between doubtful pectoriloquy and bronchophony. If, therefore, cavities can exist without pectoriloquy, and pectoriloquy without cavities, Skoda thinks it should be discarded as a dis-

tinct condition, no real difference existing between it and bronchophony. His modifications, therefore, of the thoracic voice are the following:—

"1. The voice, accompanied by a concussion in the ear, completely traverses the stethoscope. Loud bronchophony, which may be either clear or dull.

"2. The voice, unaccompanied by concussion in the ear, passes incompletely through the stethoscope. Weak bronchophony.

"3. An indistinct humming with or without a barely appreciable concussion in the ear.

"4. Amphoric resonance and the metallic echo of the voice."

It would thus appear that his loud and weak bronchophony resemble Laennec's perfect and imperfect pectoriloquy in the character of complete or partial conduction of the voice through the stethoscope, but differ from them and each other in the shock communicated to the ear, which is not found in the second modification. Distinctness of articulation does not constitute a difference between these two forms, as it exists in weak bronchophony. He uses this sign as the point of distinction of his loud bronchophony into clear and dull; in the latter the voice produces a concussion in the ear, but the words are not distinguishable.

The following are the pathological conditions associated with these modifications of the voice:—The loud bronchophony always indicates the presence of a considerable amount of consolidated lung substance beneath the spot, either in contact with the walls, or separated from it by solid or fluid pleuritic exudations of no great thickness. Such a state may exist in many abnormal conditions of the lung, hepatization and tubercular infiltration being the most obvious; pulmonary apoplexy is rarely sufficient; fluids in the pleura do not produce it of themselves, except in the upper half of the interscapular region; but a moderate effusion, combined with a compressed or consolidated lung, deprived of air, and with open bronchial tubes, may afford it. He denies altogether that we can diagnose the existence of a cavity by any direct inference from this sign, and says that all our evidence must be circumstantial, our opinion being guided by the fact, that as abscesses are rare in pneumonia, the probabilities are in favour of its production in that disease by enlarged bronchial tubes, and the reverse in tubercle of the lung.

"As we know that abscesses are very rare in pneumonia, and vomicæ rarely absent in tubercular infiltrations, we shall not often err if, in tubercular diseases, we prognosticate the presence of cavities

where the voice is heard loudest, and never infer the existence of an abscess in pneumonia from the thoracic voice, however loud it may be heard.

The term, weak bronchophony, as above defined, indicates the presence of extensive pleuritic effusion in addition to the diseased conditions referred to under loud bronchophony. The great difficulty of deciding between these two states is admitted by the author, and he enters into considerations assisting the diagnosis: if the extent of dulness on percussion be small, say, over half of one lobe of a lung, the completeness or incompleteness of the dulness is our guide; but if the extent be more considerable, he depends more on the displacement of neighbouring organs, which never occurs in hepatization or tubercular infiltration. Changes of the position of the patient give no sign to be depended on. We must be cautious in our interpretation of bronchophony when heard in the interscapular regions, as being often normal; but if it be as loud and clear there as it is over the larynx, it indicates disease. The *whispering* voice always indicates a diseased state of the lungs, though not the existence of a cavity. He regards it as an articulated expiratory murmur.

It will be seen from Skoda's division of vocal sounds, that he does not include Laennec's ægophony. This has been the most contested of all Laennec's signs, as he considered it always to indicate the presence of a thin layer of fluid between the lung and the thoracic walls. It was soon, however, observed, that this was not always necessary. Dr. Stokes considers that it, or something very like it, may occur in pneumonia "when the lung has passed into its fourth stage, or when it is resolving from the third." It has been heard in some cases of tubercular infiltrations where no fluid was found in the pleura; and, on the other hand, it has been absent in slight cases of effusion fulfilling Laennec's conditions, and present in larger collections. Skoda gives at length his reasons for dissenting from Laennec's explanation. Reynaud's opinion, which has been favourably received in France, viz., that ægophony is but a remote bronchophony, heard through a layer of fluid, more or less thick, and varying from bronchophony to ægophony, and *vice versâ*, according to the depth of the layer, arising from changes in the position of the patient,—is, according to his experiments, untenable. The cause of the *tremulous* character of the voice, which Laennec explained by flattening of the bronchial tubes, and Raciborski by the tension of the pleura pressing inwards on the air-cells, is differently explained by him. He does not

think vibrations of the air are sufficient to produce it, and that it requires "the impact of one solid body upon another, or upon a fluid or aëriform body;" as an example of which he mentions the tremulous sound produced by speaking upon paper placed over the teeth of a comb. This impact arises, according to him, from the re-action of the bronchial walls upon the contained air, or a portion of mucus may cause it, occupying the orifice of a bronchial tube, vibrating like the thin tongue in the mouthpiece of tongued instruments.

How far the above-described modifications of Laennec's division of the thoracic voice are well founded will most probably be viewed with different opinions. The value of special denominations—such as pectoriloquy and ægophony—must depend a good deal on the degree of certitude with which they can be applied; and if the exceptional cases to the pathological states supposed to be represented by them exceed the latter, they lose their precision in diagnosis. It was, no doubt, an error of Laennec to view certain signs as pathognomonic, and which have not been borne out by subsequent experience, an error which must do harm to such as receive his doctrine without examination; but, on the other hand, it is very inconvenient to change, without very strong justification, an established nomenclature, especially coming from one to whom we owe so much as Laennec. No one doubts that abnormal conditions, such as those to which he gives the names of pectoriloquy and ægophony, exist: it is certainly an inconvenience in practice to find that they can be simulated by other states than those of pulmonary caverns and pleuritic effusions, but it is hard to replace them by other designations, to which at least equally strong objections may not be raised. There is no one now, of any experience in auscultation, who would depend on either pectoriloquy or ægophony by themselves, without taking into consideration both local and general signs as correcting their indications. It is admitted by Skoda, that his own modifications cannot be depended on without similar aids; whether, then, we gain by the exchange may admit of question.

We have dwelt thus fully upon the author's theory of the thoracic voice, because it is the key which admits us to his views of the normal and abnormal conditions of the respiratory organs. As we have already exceeded the space at our command, we can only glance rapidly at the remainder of the contents of his volume, though well worthy of a more lengthened consideration. He makes four varieties of respiratory sounds:

1. Vesicular respiration. 2. Bronchial breathing. 3. Amphoric echo and metallic tinkling. 4. Indeterminate respiratory murmurs. His explanation of bronchial breathing is similar to that of bronchophony, that it depends on the air in the bronchi vibrating in consonance with the respiratory sounds in the larynx and trachea in a condensed state of the lung. He rejects Laennec's cavernous respiration on the same principle upon which he discards pectoriloquy, that caverns afford no peculiarity of murmur enabling us to decide on the entrance of air into a larger space. His new class of indeterminate murmurs is very vague, and is described by negatives, having no character referrible to any of the preceding classes; they seem to be of that kind which are not difficult to be conceived, but hard to be described. As he founds no particular conclusion upon their indications, it is sufficient here to allude to them.

After some valuable observations upon the causes of the rales heard during respiration, and their varieties as to size, strength, distinctness, and pitch, to which we refer our readers for details which will amply repay them, the author gives the division of the rales proposed by Laennec, Fournet, and himself. His own is as follows:—1. Vesicular; 2. Consonating; 3. Dry crepitating rale with *craquement;* 4. Indeterminate; and—5. Rales accompanied by amphoric resonance and metallic tinkling. Of these, the vesicular originates in the air-cells and minute air-tubes, and its bubbles are small and of equal size. It solely indicates the presence of fluid in the cells, and that they are still pervious to air, though without giving us an indication of the nature of the fluid. This sound answers to Laennec's moist crepitus, which he considered a pathognomic sign of incipient pneumonia, and endeavoured, by subdividing it into crepitating and sub-crepitating, to distinguish between this rale, as occurring in other affections as well as in that disease.

The consonating rale has the same significance as his bronchial breathing and bronchophony. His indeterminate rales, as well as the murmurs of the same kind, indicate no special condition of the respiratory organs, and are so far of no value to us in practice. Under this head, he classes such mucous rales as are neither vesicular nor consonant. They afford no information as to the state of the parenchyma of the lungs and indicate merely the existence of fluids in the bronchi. He rejects Laennec's cavernous rale, as he does his cavernous respiration.

The dry sounds heard during respiration are separated by

Skoda from the rales, and designated snoring, whistling, and hissing sounds. Their explanation is much the same as is generally received.

We regret very much that it is impossible for us to enter into Skoda's account of the auscultating phenomena presented by the organs of circulation, and which shows the minute attention paid by the author to this subject. In the same way we can only briefly refer to the second part of the volume, including the practical application of his theories. This he divides into the normal and abnormal conditions of the thoracic and abdominal organs, as discernible by auscultation and percussion. The abnormal conditions he divides into unnatural positions of these organs, irregular conformation of the walls of the thorax, and diseased states of the organs themselves. Under the latter head he passes in review the several diseases of the bronchial tubes, the parenchyma of the lungs, the pleura, the pericardium, endocardium, and substance of the heart, the large arteries, and the abdominal organs. In this part there is a fund of practical information, the result of the author's laborious and careful investigations, pursued so long and so successfully in the ample field which the noble hospitals of Vienna have afforded him.

It would be an act of great injustice to the translator not to express our highest approbation of the skill with which he has performed his not very easy task. In recommending the present volume to the careful perusal of our readers, we shall only say, that it is not to be hastily taken up and laid down, but when read, it should always undergo a slow ruminating process so as to insure its perfect digestion. If thus treated it cannot but exercise a valuable influence on the mind of the reader, leading him to reflect upon and weigh the grounds of his medical belief. Many of the author's opinions require to be tested, but it must be by the same patience and ability that he has himself brought to the subject. We feel assured that his work deserves the high position it has won for itself abroad, and which it requires only to be known to obtain in this country.

Six Lectures on Materia Medica and its Relations to the Animal Economy. Delivered before the College of Physicians in 1852. By JOHN SPURGIN, M. D., Fellow of the College. London: Churchill. 1853. 8vo, pp. 204.

A SUPERFICIAL or hasty perusal of the work before us might induce the reader to differ widely from the author as to the

correctness or appropriateness of the title which he has given to these Lectures, constituting, as they appear to do, a treatise on the physiology of animal life, and on the importance of considering *the blood* as the true vital principle of all animal organization, as, indeed, the motto on the title-page plainly indicates. Having been deprived, however, of any choice in this matter by the arrangement of the College of Physicians of London in the institution of this particular annual course, the author states that he considers Materia Medica, when regarded in a truly philosophical point of view, to have reference to the whole extent of animal being, and to the various laws and principles by which its economy is regulated and preserved. "I shall not, therefore," he says, "regard it merely as a collection of materials to be employed, either arbitrarily or empirically, in the treatment of disease; but I shall endeavour rather to contemplate it in its widest relations and most extensive significance,—as comprehending, in fact, every particular that relates to the preservation and well-being of our physical existence."

The first question proposed for solution at the outset of the inquiry is—To what common principle do the constituent parts of all animal organization refer their origin; to what, in fact, do they stand subordinate and subservient as to a common principle and source? The next step of the inquiry arises naturally out of this—What are the particulars involved in this general principle? what are the elements which enter into the composition of the blood?

This, then, being his starting point, he proceeds at once and at considerable length to a minute examination of the physiological relations of the fibrine, albumen, and red particles; and through nearly a whole lecture has he extended his observations on these proximate principles of the blood, as well as on some remarkable facts which have been ascertained regarding the effect of medicinal or chemical agents in modifying this important element of the animal economy.

An analytic review of the various microscopic researches which have been made upon the structure of the red globules, occupies a considerable portion of the second lecture, in which Dr. Spurgin considers at some length the causes of the singular discrepancy to be found in microscopic observations, and the importance to be attached to them in endeavouring to arrive at definite conclusions with regard to the powers and properties of the blood globules. The fluidity of the blood is next considered, a property which can be recognised therein before the development of any solid constituent whatever of

the organism. He argues strongly in favour of the truth of the position, originally maintained by Böerhaave, that there is a veritable fluid circulating in the nerves—the vesicles of the cerebral cortex acting as so many minute or microscopic hearts, which receive and re-expel the nervous current; and in support of his views on this part of the subject, and of their application to the principles of pathology and therapeutics, he adduces some very ingenious arguments.

His incidental remarks upon homœopathic practice are sound and judicious, and yet by no means illiberal. In the treatment of disease we are too apt to lose sight of the fact, that in many diseases there is a decided tendency to spontaneous recovery; in fact, it is in the nature of the animal economy itself to repair and to heal what is amiss. It is for art, experience, and judgment, combined, to assist nature, and so to expedite the cure. Art is but nature's auxiliary, and, if rightly exercised, removes the obstructions that oppose and frustrate nature. That which nature requires in homœopathic practice is *time*, protracted to weeks, months, and, it may be, years—as long, in fact, as the patient's credulity (and his pocket) can be further drawn upon.

Having spoken at considerable length of the blood and its several properties, more especially of its chemical relations, its colour, warmth, and fluidity, as well as its vitality, Dr. Spurgin proceeds to elucidate this latter property more fully by examining "the first visible product of the red blood"—the heart. And here we find him again endeavouring to revive and arrange the unsettled views of the older anatomists. He maintains that the heart-walls are indebted for their vascular supply, not, as usually taught and believed, to the coronary arteries *directly*, but rather in a secondary way, these vessels acting merely in the capacity of reservoirs of variable supply, in fact, safety tubes to hold in readiness a certain quantity of blood which they can return to the heart in greater or less amount as may be required; while he conceives the ducts of Thebesius to be the true channels of arterial or nutrient supply to the heart-walls:

"The communication between these ducts and the superficial vessels of the heart is, in fact, unquestionable, whether it be between the coronary arteries and the heart-cavities on the one hand, or between these cavities and the coronary veins on the other. With this ready and permanent communication, then, there can be no difficulty in conceiving how well suited the so-called coronary arteries are to perform a mixed, simultaneous function of artery and vein, and to stand in the relation of veins to the ductus Thebesii, which, as arteries, rise from the ventricles by many mouths rather than by one."

Amongst many illustrations and arguments in favour of his hypothesis, he makes an ingenious application of the facts of a remarkable case related by Mr. Adams, in the Dublin Hospital Reports[a], in which the coronary arteries were completely ossified, even to the extent of obliterating the continuity of their canals.

To such of his own views on some important points as will be found to differ materially from those generally received, he does not wish to attribute any value on the mere ground of novelty, and as they have been offered to the profession, "as the mature convictions of many years' professional practice, based upon extensive observation and careful research," we do not hesitate to recommend the work to the careful perusal of the candid philosophical inquirer, written as it is in a liberal spirit, and in a very elegant style.

On Diseases of Women and Ovarian Inflammation, in relation to Morbid Menstruation, Sterility, Pelvic Tumours, and Affections of the Womb. By Edward John Tilt, M. D., &c. Second Edition. London: Churchill. 1853. 8vo, pp. 276.

The present edition of Dr. Tilt's book is so much more voluminous than the former, containing not less than double the amount of matter, that it may almost be regarded as quite a new work. We find, too, that he has made a slight change in its name. The first edition was "On the Diseases of *Menstruation* and Ovarian Inflammation, in connexion with Sterility, Pelvic Tumours, and Affections of the Womb," whilst this edition professes to be "On Diseases of *Women* and Ovarian Inflammation, in relation to Morbid Menstruation, Sterility, Pelvic Tumours, and Affections of the Womb." Without wishing to be hypercritical or fastidious, we must in candour express our dissatisfaction with both these titles, and especially the latter; for view it in what light we may, whether with respect to what is strictly correct, or to propriety of language, it is alike open to objection.

The introduction (occupying about twenty pages), and about the latter half of the volume, represent the entire contents of the former issue, and still form the distinctive and most original features of the work. We do not perceive any important change here in the author's views or opinions, and hence we must beg to refer the reader to the volume of this

[a] Vol. iv. p. 443.

Journal[a] in which a faithful though brief exposition of them was given, together with some comments thereon. The general tenor of Dr. Tilt's remarks upon ovarian inflammation would lead to the belief in its being of much more frequent occurrence than accords with our own experience, or that of most other observers. Amongst the exciting causes of sub-acute ovaritis are enumerated, mechanical injuries at parturition; suppression of milk; cold; retention of the menstrual flow; uterine disease; uterine injections; caustic to the neck of the womb; instrumental interference; metrotome; stem pessaries. Many of these causes, we know, are in wide and constant operation; and yet how rare, comparatively speaking, is inflammation of the ovary. In the same way, multiplied examples of amenorrhœa, menorrhagia, chlorosis, hysteria, and dysmenorrhœa, come under the notice of every hospital physician; but in a very small proportion of them are unequivocal symptoms of ovarian inflammation found present. In speaking thus, we do not mean to disparage Dr. Tilt's labours,—far from it; but merely to counteract the impression which a cursory reader of this treatise might receive, that the above so-called functional derangements of the uterus are *often* mere symptoms of sub-acute ovaritis. This caution we feel convinced is the more necessary, as the author's views are so ably defended, and harmonize so beautifully with the recent physiological investigations, tending to show the paramount influence exerted by the ovaria in the sexual system of the female. The remaining portions of the book, as we have already said, form a large share of the whole, and contain a great deal of varied information relating to each and all of the symptoms which are met with as precursors, concomitants, and immediate sequelæ of the menstrual act. The author is here, perhaps, needlessly minute, and invests some really trivial and unimportant circumstances with too much importance; as, for instance, in trying to establish by statistical analysis the relative frequency before, during, and after the catamenial period, of sick headach, pseudo-narcotism, the different states of the bowels (whether relaxed, confined, or undisturbed), vaginal leucorrhœa, &c., &c. Twelve chapters are devoted to examining the theories, natural history, and attendant phenomena of menstruation. These last are classified agreeably to the modern physiological doctrines. Thus we have the "ganglionic symptoms of menstruation," the "cerebral symptoms" (to which group are referred pain in the head, sick headach, pseudo-narcotism, hysteria, epilepsy, and insanity), and

[a] Vol. x., August, 1850, page 131.

the " spinal symptoms." All through these chapters there seems to be a laboured attempt at physiological refinement and statistical accuracy, extending even to the most trivial details. This will make them, perhaps, a little tedious to the general reader: to compensate for this, however, they are abundantly illustrated with highly instructive clinical histories, and the therapeutical indications of the various pathological symptoms (if we may so speak) are carefully pointed out.

Dr. Tilt's views seem to lean towards the ovular theory of menstruation, and the weight of evidence, as adduced by him, is in favour of this doctrine. The strongest fact, perhaps, that has been brought against it is that supplied by the case of the notorious Mrs. Manning, the examination of whose body is recorded by Mr. Paget. In this instance, which is quoted by our author, there certainly was no appearance in either ovary of the recent rupture of a Graaffian vesicle. But, on the other hand, it may be urged, that we do not know at what precise period of the catamenial flow the ovum is discharged, and that in this particular instance it had only commenced twelve hours before her execution; and, further, that " in the left ovary one Graaffian vesicle was fully developed and prominent,"—ripe, in fact, for discharging its contents when the proper moment had arrived. We entirely agree with Dr. Tilt in the observation, that " the anatomical phenomena of ovulation should be present to the mind of the practitioner in cases of deranged menstruation, in cases of pelvic inflammation, and in cases of sanguineous tumours." With respect to the *source* of the menstrual discharge, the author is of opinion that it has three origins: 1st, in the ovary; 2nd, in the Fallopian tubes; and 3rd, " that portion of the internal surface of the womb which is lined with the decidual membrane." We believe Dr. Tilt to be correct in not including the vaginal mucous membrane amongst the sources of the menstrual secretion, although some physiologists have strongly maintained this view. Mr. Whitehead, indeed, tells us he " has frequently noticed the exudation of blood from warty excrescences and abrasions of the vaginal membrane during the menstrual period, but never from the healthy structure."

In speaking of the diagnosis of sub-acute ovaritis the author takes occasion to notice a paper by Dr. Churchill on *ovarian irritation*, which appeared in the Number of our Journal for August, 1851. He strongly objects to the term " ovarian irritation," " because," he says, " it has already been employed to express the physiological action of the ovaries, and imports another vague and indeterminate term in ovarian pathology, already sufficiently obscure." He considers the affection de-

scribed by Dr. Churchill to be only a form of lumbo-abdominal neuralgia, chiefly confined to the ovary. In reality, however, the difference, as appears to us, is only one of words. Dr. Churchill regards this affection as having its seat in the ovary, and being of a *non-inflammatory* nature; and in the absence of any positive evidence of its neuralgic character he calls it "irritation," —a term of happy ambiguity, implying any condition except inflammation. Dr. Tilt holds precisely the same views, but, venturing on a more positive diagnosis, pronounces the disease to be neuralgia of the ovary, and tells us, moreover, that some two or three Continental authors have spoken of it.

A very interesting question both to the physiologist and practitioner is that of menstruation during pregnancy. Some authors of eminence, including Denman, Dr. Hamilton of Edinburgh, and Schmitt, strongly discountenance the possibility of its occurrence, while very many others, of equal celebrity, admit it. Mr. Whitehead of Manchester, who investigated this subject with much care, and even submitted fifteen pregnant women to examination by the speculum, at the time of this menstrual discharge, states, as a general rule, to which he had met no exception, "that the blood discharged in cases of alleged menstruation, during pregnancy, is furnished, not by the lining membrane of the uterus, nor by any healthy secreting surface, except sometimes, perhaps, the inferior part of the inner cervix, but by the lower extremity of the uterus external to its cavity, or by the contiguous vaginal reflection being in a state of suppurative inflammation." Now, in opposition to this very strong testimony, our author affirms, that he has found the menstrual flow occur with its usual pains during pregnancy oftener than is generally admitted, without, in many cases, any ground to attribute it to ulceration of the neck of the womb. The proportionate frequency of this occurrence he states to be "eight per cent." (of pregnant women, we suppose). It is a fact well known to practical accoucheurs, and one fully borne out by our own experience, that during the early half of pregnancy, at each periodical return of the menstrual epoch, there is a decidedly augmented determination of blood to the uterus and vagina, and that hence at these times abortion is most to be apprehended. Now it can be easily understood how any slight hemorrhagic discharge from the uterus at this period can be mistaken for menstruation. And again, we can readily suppose, what, indeed, Mr. Whitehead's researches have shown does occur, that any ulcerated surface on the os uteri, or contiguous portion of the vagina, may become a source of sanguine exudation during the con-

tinuance of this hyperemic state of the internal genitals. In one or other of these ways we would explain all the cases of so-called menstruation during pregnancy. On purely anatomical grounds we have always rejected the possibility of true menstruation taking place from the gravid uterus.

We cannot conclude this notice without adverting briefly to the contents of the last chapter, entitled, "Pathology and Treatment of Sanguineous Pelvic Tumours," as this is a subject comparatively new to the readers of English medical literature. Dr. Tilt's definition of these is, "Cystic tumours formed by the effusion of blood in or out of the peritoneum which lines the pelvis." Some examples are given of this very rare disease, but only one of them occurred in Dr. Tilt's own practice.

"With respect to the predisposing causes of the intra-peritoneal sanguineous tumours, we may notice the varicose development of the sub-peritoneal veins, as in a fatal case seen by Marjolin, subsequent to repeated pregnancies or miscarriages. Violent efforts, menstruation, and miscarriages, seem to have been the determining causes, to which we may add the rupture of a pelvic aneurism; in Piogey's case, acute ovarian disease, and hemorrhage at the menstrual period into the cellular tissue surrounding the ovaries; and with respect to the causes of intra-peritoneal sanguineous pelvic tumours, the obstruction of the menstrual flow, the rupture of Fallopian tubes may cause the complaint; and Denonvillier's fatal case shows that it may be caused by ovarian hemorrhage occurring during the process of ovulation."

The diagnosis of these tumours, as may be readily conceived, is very obscure. The sudden appearance of tumour,—the initial symptoms of collapse followed by localized peritonitis,—pressure on the upper and posterior part of the vaginal canal, and on the anterior wall of the rectum,—the absence of any pulsatile movement, and, in some cases, the existence of fluctuation,—are the leading symptoms to guide us in the recognition of these formations. According to the testimony of those who have seen and recorded most examples of this disease, the patients had nearly all suffered, more or less, from dysmenorrhœa. As to the result of these cases of pelvic sanguineous tumour, Dr. Tilt tells us that, generally speaking, they end favourably, even when they open into the rectum or the vagina, and that many of them terminate by resolution.

Dr. Tilt concludes his work with a Bibliographical Index, alleging as a reason, that he has been struck with the inaccuracy of the references given in medical works, and very properly remarking, that the way to prevent this evil would be "for authors never to transcribe a reference without having

ascertained its correctness by consulting the original." The necessity there exists for this piece of advice cannot be better exemplified than by the fact of the author himself being guilty of inexactitude similar to what he complains of in others; as, in nearly every instance where he has occasion to refer to this Journal, he misquotes our name, calling us the Dublin Medical and Surgical Review! This index will, as far as it goes, be useful to the student of ovarian and uterine pathology, but it is, of course, exceedingly limited.

L'Huile de Foie de Morue, envisagée sons tous les Rapports comme Moyen Thérapeutique. Par L. J. De Jongh, Docteur-médecin à La Haye. Paris: Victor Masson. 1853. 8vo, pp. 262.

In the ninth volume of our present Series[a] we reviewed at some length the therapeutical history of cod-liver oil, and its introduction into the practice of medicine, taking as our leading text-book the English translation of the first edition of De Jongh's book by Dr. Carey. Of the present treatise by the same author no translation has yet appeared, but we hasten to make our readers acquainted with its publication, although we are at present unable to afford space for any review of its contents. Dr. De Jongh states in his preface, that this is not to be regarded as a new edition of his former essay, for, with the exception of the analysis of the three species of the oil then published by him, all else is new. Several varieties of the oil recognised since then have been examined, and their composition given; a chapter on its adulterations and their mode of detection has been added; and the description of its therapeutical properties, with rules for its administration, includes the most recent advancement of our knowledge regarding this most important aid to the physician in the treatment of disease: in short, we are acquainted with no work which embraces so completely all that is known regarding cod-liver oil, and we therefore warmly recommend it to the notice of the profession; nor in doing so can we refrain from bestowing our praise on the getting out of the volume,—its beautiful paper and typography, so highly creditable to the now celebrated publishing house of Masson.

[a] Page 412.

Copy of a Letter from Dr. E. Seaton to Viscount Palmerston, with enclosed Copy of a Report on the State of Small-pox and Vaccination in England and Wales, and other Countries, and on Compulsory Vaccination; with Tables and Appendices. Presented to the President and Council of the Epidemiological Society by the Small-pox and Vaccination Committee, March 26, 1853. Parliamentary Paper, Folio, pp. 64.

The Report before us, though not so extended as was at first contemplated (its more immediate object being to show from the statistics of small-pox the mischief resulting from the too culpable neglect of vaccination), still contains a mass of valuable information as regards the mortality from small-pox in Great Britain and Ireland, as also in various countries in Europe, with some remarks on the laws and regulations connected with vaccination as enforced in different countries. The sources whence the data are derived are highly authentic, being principally documents obtained from various public authorities, as also replies to queries addressed to the public vaccinators, and such other members of the profession as were known to have paid particular attention to these subjects.

The evils of unchecked small-pox are clearly demonstrated, as also the efficiency and entire safeness of vaccination as a prophylactic. The latter position is affirmed by the general immunity from small-pox enjoyed by the vaccinated, and further, by the gradual decrease in mortality from small-pox since the introduction of vaccination; as also by the fact, that those countries are freest from variola in which vaccination is most effectually carried out, whether by a system of compulsion, direct or indirect, or one of rewards and encouragements. These conclusions are deduced from numerous Tables, drawn up from the statistical returns already alluded to, whereby it is clearly shown that the mortality from small-pox in England and Wales, —where vaccination is entirely voluntary, except for those who enter the military or naval service, &c., not any inducements even being held out to medical men to encourage them to promote its extension,—is considerably more than *double* what it is in any country in which the being submitted to the prophylactic means is compulsory. Hence the Committee advocates the passing an enactment for rendering vaccination compulsory, a suggestion in which we entirely concur; the mode of enforcing its observance being the principal difficulty to be contended with. As to the justifiableness of such a proceeding, we quote the following passage:

"The principle of so using one's own as not to injure another's, is one which has always been acted upon in our legislation as regards property and personal nuisances, and we submit that it is but an extension of this principle to apply it to the questions of life and health.

"If good laws could be so worked as to secure universal vaccination, there is little doubt that the mortality from small-pox might be reduced everywhere, if, indeed, it might not be wholly got rid of."

In the kingdom of Hanover, where the laws with reference to vaccination are particularly strict, a penalty of fine or imprisonment is inflicted on all who disobey. In the year 1847, out of a total mortality of 45,850, there were but *eight* deaths from small-pox, or 1 in 5,728. And Dr. Watson states, that in Denmark variola had at one time disappeared before the defensive influence of compelled vaccination, though, he adds, that chance and a careless security, engendered by the absence of the pest, have led to its re-introduction there.

We quite agree with the Committee in their remarks as to the time at which vaccination ought to be performed. From these Tables it would appear that in a very large proportion of children it was not attempted till after the expiration of a year and upwards: this we deem a great oversight. The Dublin Vaccine Institution advises from the second to the fourth month as the most suitable period, and, as a general rule, we think it might be advantageously adopted, liable, however, to exceptions to be certified by some medical referee. But it would extend this notice to too great a length were we to go more into detail; we shall, therefore, conclude with a few remarks on vaccination in Ireland as referred to in this report.

The great neglect of vaccination, and popular prejudice in favour of inoculation with variolous matter, more especially in the rural districts of Ireland, as alluded to in a report by Mr. Wilde, Assistant Commissioner of the Census of 1851, to the Lord Lieutenant, are points worthy of fixing our serious consideration:

"No less than 58,006 deaths from small-pox were returned to the Census Commissioners for the ten years ending the 6th June, 1841, and I have reason to believe that the numbers will be *little less* for the decade ending in March, 1851."

The following are some of the suggestions offered:

"That the constabulary should be directed to summon all persons known to propagate small-pox by inoculation, and that the attention of the resident magistrate should be called to the circumstance.

That all persons entering a workhouse who do not exhibit the marks of small-pox, or the evident traces of inoculation or vaccination, should be immediately vaccinated by the medical attendant of such workhouse."

With reference to the present system of propagating vaccination in Ireland, according to the regulations of the Medical Charities Act, the public dispensaries are obliged to provide vaccination for all applying thereto for such purpose; but we would direct attention to what we consider a great defect in the manner of carrying this out, viz., the want of some provision for enforcing (for the purpose of inspection) the return of those submitted to the operation; and though, from their not returning, the inference may possibly be drawn that the vaccination has taken effect, still there is not any certainty thereof; nay, often far otherwise. It does not by any means follow that every child whose arm shall become inflamed, after having had vaccine virus inserted therein, is thereby protected against small-pox,—inasmuch as if the disease present not in the successive stages its specific characters, from the first appearance of the papula to the formation of the vesicle, the natural development of the areola, and final healthy exfoliation of the crust, which can only be ascertained by repeated inspections, the system cannot be considered to have been salutarily affected. The contrary we have good reason for feeling assured is too often the case, and such, we are satisfied, has favoured the spread of the notion of the inefficacy of vaccination as a prophylactic.

Another disadvantage, though of minor importance, arising from children not being brought back for inspection, is, the loss of a supply of vaccine lymph, which otherwise might thus be obtained. We quite agree in the prudence of establishing a distinct depot for the collection and distribution of pure vaccine lymph. This object has, by the Dublin Cowpock Institution, been, for now nearly half a century, well carried out, considering its means. Originated by a few eminent physicians and surgeons of this city, it has depended for support principally on subscriptions and the sale of lymph, assisted by a small Government grant, which, though subsequently increased, is still of small amount, when we consider the benefits resulting to society from its operations. This Institution, we do not hesitate to say, should be the legitimate depot; and, from the experience and character of its directors and medical officers, it would, we have no doubt, if aided on a scale proportionate to its usefulness, be fully equal to meet the demands of the United Kingdom.

Report of the Central Board of Health of Jamaica. Spanish Town: 1852. 8vo, pp. 289.

Appendix to the Report of the Central Board of Health of Jamaica. Spanish Town: 1852. 8vo, pp. 272.

While perusing these Reports we were forcibly reminded of the following passage from the clinical lectures of our lamented friend and contributor, the late Dr. Graves:—

"He who gives instruction to a clinical class in Berlin, Stockholm, Vienna, or Paris, has much to answer for, if he discharge not his duties with zeal and diligence. Yet if he fail to make his pupils good practitioners, their errors, however deplorable, are circumscribed within comparatively narrow bounds, and limited in a great degree to their own countrymen. But the British teacher sits in the centre of a circle far wider than Sweden or Prussia, Austria or France; his pupils are to be met with practising in every climate, exercising their art in almost every habitable region of the globe, and dispensing the blessings of health to all races of mankind: to the hardy white settlers of Canada, the aboriginal red-skins of North America, the negroes of Jamaica, the Hottentots and Caffres of Africa, and the countless tribes of Hindostan." Universality in the observation of disease is one of the characteristics of British medicine. In every part of the inhabited world are to be found our brethren engaged in their professional avocation, and possibly in no quarter of the globe does disease exhibit a more terrible aspect, requiring all the resistance which medical aid can afford, than in the West Indies. We are, therefore, much gratified at the appearance of this Report. It was drawn up for the information of the local Legislature by the Central Board of Health of Jamaica, with the co-operation of Dr. Gavin Milroy, who had been sent out as medical inspector during the epidemic of cholera. It does not, however, relate altogether to the cholera epidemic of 1851–52, but rather to the public health, sanitary condition, and arrangements of the island, and is, we believe, the first official medical report *published* from our West Indian possessions. We hope the laudable example thus set will be followed by the profession in others of our colonies; an immense amount of valuable information would thus be accumulated, and a knowledge of the phases which disease presents in different parts of the world be made familiar to us who dwell at home.

The first part of the Report relates to the subject of quarantine. It is neither our purpose nor our inclination to

enter into the consideration of this question at present. We will not engage in the battle between the contagionists and non-contagionists; for we believe that discussion on this subject bears a strict analogy to religious controversy, by which invariably no change of opinion is produced, although much logic and precious time be wasted.

This *vexata questio* has evidently intruded itself in the preparation of the Report before us, and it would appear that the non-contagionists have had the majority on their side. Its introduction, however, has led to an apparent inconsistency; thus, in page 4 of the Appendix, we find the following suggested rule:

"The said Central Board of Health shall have full power, and they are hereby authorized to require the immediate removal and interment of the dead, and to make and issue all rules and regulations respecting burial-grounds, means for the removal of the dead, and mode of sepulture, and to prohibit wakes and other idle congregations of persons in infected districts or places."

While in page 17 we read this passage:—

"With respect to the interment of persons who die from cholera, the Central Board are of opinion, that the prevalent notion that a dead body is more liable to retain and give off infectious effluvia than a living one, is not warranted by any authenticated fact within their knowledge."

The objects of the Board are evident:—1st, To prevent crowds assembling at wakes, &c. 2ndly. To give confidence to the attendants of the sick. Both results might be gained under proper management without any allusion to contagion, and the expression of difference of opinion be thus avoided: for, Dr. Turner, President of the College of Physicians and Surgeons of Jamaica, attached a dissent from the doctrine of non-contagion contained in the notification respecting the bodies of those who die of cholera.

Medical men, in dealing with the people during an epidemic, should neither give rise to carelessness from a supposed security which may be false, nor, on the other hand, create a panic in the public mind by promulgating the idea of the infectiousness of disease. In courts of law, when conflicting circumstances render a decision imprudent as a precedent, the court declares "no rule." We would recommend a similar course in what may be termed medical legislation, when the subject involves the question of the contagious character of disease. The educated physician, whether he be a contagionist

or the contrary, must subscribe to the value of sanitary measures; and if such as are recommended in the volume before us be carried into effect, pestilence will not hereafter assume the awful character which it presented in Jamaica, as well as in Ireland.

The Report notices, also, the sanitary state and social condition of the poor in towns and agricultural districts. The analogy between Jamaica and Ireland under this head is too remarkable to be passed by unnoticed, and the picture presented is melancholy indeed. It is not within our sphere to inquire into the causes which have produced such misery and degradation of the lower classes in two of the most fertile islands in the world, and which were mainly instrumental in the production of an unprecedented epidemical mortality.

We regret to observe that the social position of the great number of the medical practitioners in Jamaica is very similar to that of their brethren with us. In both places the local authorities appear to think that the cheaper medical services can be obtained the better,—forgetful of the important fact, that every one in the land has an interest in upholding the status of the medical profession, as, should it degenerate into a mere trade, men of a high order of mind will cease to engage in its pursuit, and then ignorant presumption and bad practice must bring home to each family fearful results.

Before concluding our necessarily short notice of this Report, we must observe, that the Central Board of Health of Jamaica, with the assistance of Dr. Milroy, is deserving of the highest commendation for the sound views inculcated, and the efficient sanitary measures recommended by it. We cannot say so much in praise of the style and typography of the volumes, but every allowance should be made considering the circumstances under which they have been brought out. We are so pleased with the spirit of the entire that we must overlook minor faults, particularly as the experience now gained will, we are confident, prevent such defects in any future report which may issue from the medical practitioners of Jamaica.

PART III.

MEDICAL MISCELLANY.

TRANSACTIONS OF THE ASSOCIATION OF THE FELLOWS AND LICENTIATES OF THE KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

SESSION 1852–53.

First Meeting, November 3rd, 1852.

Dr. Aquilla Smith described the effects he witnessed as consequent on the administration of the nitrate of tellurium, some of which had been sent to him by Professor Simpson, of Edinburgh, at whose request he made some experiments on its medicinal action.

Tuesday, August 31st, 1852. At noon, one half-grain pill was administered to each of the following patients in Sir Patrick Dun's Hospital:—Christopher Connor, aged 32, under treatment for chronic pleurisy, and John Shalvey, under treatment for a venereal eruption. The two patients lay in beds about five feet apart, in a spacious and well-ventilated ward. Sept 1. A peculiar odour was perceived from Connor's breath, but none from Shalvey. A pill was administered to each patient at noon. Sept. 2. An alliaceous odour was very perceptible: two physicians noticed it immediately on entering the ward. A third pill was administered to each of the patients at noon. Sept. 3. The odour to-day was very strong, and so offensive that the nurse and the other patients in the ward complained of it; the two patients also were very sensible of it, and remarked that they had a very disagreeable taste in their mouths. Shalvey, who was a sailor, said the taste was like garlic. One of the physicians, who saw the patients the day before, was so disgusted that, on entering the ward to-day, he retired immediately. The odour was very like that emitted by metallic arsenic when volatilized. Each patient having taken three pills, and the effect being so palpable, Dr. Smith did not consider it necessary to pursue the experiment. On questioning the patients minutely, he

could not ascertain that any other particular effect had been produced by the pills. Shalvey said, they made him perspire more than usual. Sept. 4. The smell through the ward was diminished, but the exhalation from the patients' lungs was very offensive. Sept. 5. The peculiar odour less evident on entering the room. Sept. 8. Connor's breath still retained the peculiar smell very strongly; Shalvey was quite free from it. The latter patient, during the experiment, did not emit as strong an odour as Connor. The increased perspiration may have eliminated the tellurium more rapidly than in the case of Connor, who did not perspire more than usual. Sept. 16. Connor's breath still retains the odour, which is not perceptible when standing close over him.

Dr. Osborne read a paper entitled, "Some leading facts to be recollected in the examination of the fæces in disease"[a].

Dr. Lees described a case of diabetes, in which he had administered rennet with rather favourable results. Eventually the case terminated fatally from an attack of fever, and on the post-mortem examination tubercles were found in the liver, spleen, &c.[b]

Second Meeting, December 1, 1852.

Professor Law read the following Essay on the complication or alternation of affections of the chest and the brain. "This subject is not a new one to this Association, having been already under its notice. But the aspect under which I present it differs in this respect, that while the communication to which I refer as before occupying the attention of the Association exhibited the complication originating with the brain, and the thoracic organs being subsequently involved, that which I now make presents an inverse order of evolution in the complication in which the affection of the thoracic organ precedes, and that of the brain comes on at a later period. When we reflect upon the complexity of the animal body, and consider it as a machine composed of several lesser machines, all co-operating to one great end, while each performs its distinct and separate functions; and when we further reflect on the more or less intimate relations existing between these several component parts of the general machine, relations arising out of similarity of structure or association of function,—we wonder less at the complication of disease than at its simplicity or isolation. The accidental or incidental appearance of another disease in the progress of an already existing one is ever a subject of deep interest to the pathologist and to the practical physician. It often embarrasses his diagnosis, and not unfrequently interferes with the simplicity of his treatment. How often is it the case, that disease has been of long

[a] Published at length in the Dublin Quarterly Journal of Medical Science, vol. xv. p. 104.

[b] Published in the Dublin Quarterly Journal of Medical Science, vol. xv. p. 469.

standing before it has been brought under the notice of the physician! This may occur from various causes. Many of our poor hospital patients cannot afford to attend to the early intimations of disease, and therefore struggle against it until they are forced to yield. How often have we presented to us patients affected with dropsy whose story is this:—That either he or she has had a cough for several years past, that each year the cough has become worse and the breathing more difficult than the preceding year; that the difficulty of breathing was now constant; that now palpitation of the heart bebecame inconvenient, but that they still struggled on till the dropsy had quite disabled them. What a complication have we here, and how remote is the last link of the morbid chain from the first! An original bronchitis produced emphysema of the lungs, which has rendered the organ more susceptible of future attacks. Each succeeding bronchitis increased the emphysema, which, by obstructing the pulmonary circulation, caused congestion of the right side of the heart, and consequent congestion of the two cavæ, and therefore, of the general venous system, upon which the dropsy, as a distant result, ensued. The physician will have little difficulty in unravelling this complication. But the task is not always so easy; it will happen that disease will be so insidious in its progress, and so obscure in its symptoms, as to escape notice until it has become complicated by involving some organ whose derangement is more calculated to arrest attention. Here the more palpable and prominent symptoms of the secondary affection may so obscure the primary one as to cause it to be overlooked. We have seen a functional derangement of the heart cause a malignant disease of the stomach to be overlooked until this latter, extending up into the œsophagus, almost completely obstructed deglutition, and then was discovered. This fact will appear less strange when we consider how often post-mortem examinations discover to us extensive malignant disease of the stomach, which no symptoms during life betrayed, because the diseased part involved neither orifice. We have also seen mitral valve disease obscured by the more prominent symptoms of hematemesis to which, with other congestions, the cardiac disease had given rise. I could multiply such examples, but I am sure that many such are familiar to most of my audience. Although complication often does obscure disease, and embarrass its diagnosis, it is but fair to admit that such is not always the case, but that in some instances it tends to its discovery and detection. How often will aneurism of the aorta exist without any suspicion of its existence until the tumour by its increased growth compresses either the trachea or one of the bronchi, or a portion of the lungs or the œsophagus, when its interference with the function of either of these organs will lead to an examination issuing in its discovery? Such I believe to have been the history of this case of cyanosis which came under my care three days before the death of the individual. The drawing which is here presented, and which exhibits a more livid and congested appearance of the face

than I ever saw in Asiatic cholera, is no exaggeration; it is a faithful portrait. The pathological preparation removed from the body exhibits the disease, which consisted in an aneurism of the ascending aorta, so compressing the descending vena cava as nearly to obliterate its canal. Between the aneurism and the vein there was a very small opening. The information we were able to obtain furnished us with no grounds for supposing that the individual had any suspicion of his labouring under any serious disease, for he had never applied for medical advice. The day before he came under my care, and four days before his death, he threw himself upon a sofa, when he was suddenly seized with an indescribable sense of præcordial distress, upon which followed immediately the deep livid complexion of his face, which continued unchanged till his death. The aneurism indicated its existence by a double pulsation, without any abnormal sound, behind the sternum.

"Various have been the attempts made at different times to classify the complications of disease, and to reduce them to general laws and principles. But I cannot say that such attempts have been very successful, nor indeed could it have been expected that they should have proved so, as a satisfactory classification would require a greater amount of knowledge in the different departments of medical science, to serve as a basis for such classification, than actually existed at the time when such attempts were made. There is no arrogancy or presumption in asserting that our improved knowledge of anatomy, physiology, pathology, and organic chemistry, has fitted us for taking exceptions to existing classifications, and for demanding a remodelling of this subject, which is so full of interest, as well to the science as to the practice of medicine. Has not anatomy, by identifying the external structures and tissues, the seat of articular rheumatism, with the enveloping and lining membranes of the heart, explained to us the frequency of the complication of articular rheumatism and endo- and pericarditis? How many hitherto inexplicable and mysterious phenomena, exhibiting themselves in the nervous system in consequence of affections of different organs and tissues, have been rendered intelligible by the discovery of the reflex function of this system? Do we not here find the explanation of the convulsions dependent on intestinal irritation and on dentition? Is not this the key to that extraordinary complication—pericarditis and chorea?

"Has not our increased knowledge of organic chemistry done much for us in explaining certain nervous phenomena, such as coma and convulsions, produced by the blood containing in it certain deleterious elements which ought to be separated from it. Are we not now in a position to understand the convulsions that so often usher in the fatal termination of jaundice and of Bright's disease of the kidney? But whatever progress we have made in these several branches of medical science, and thus in a degree surmounted the difficulties and embarrassments that hitherto stood in the way of our analysis of complicated disease, much still remains to

be done before we can flatter ourselves that we can relax our efforts, and remain satisfied with what has already been effected. How much have we still to learn of the pathological conditions of the blood? And when we consider the influence that the various conditions of this fluid must exercise on the several organs that it supplies, and which derive their life from it, what hope have we of thoroughly understanding disease until we have attained to such a knowledge of this mysterious fluid as we should require for this purpose, and which the very nature of the subject seems almost to refuse us? I will now bring before the Association two cases illustrating these remarks.

"A gentleman, aged 50, engaged in the duties of a profession in which his mind was much on the stretch, especially at the time I saw him, who had generally good health, although he exhibited indications of a gouty habit but never had a distinct fit of gout, requested me to call to see him. I found him hanging over the fire—it was in the month of December—and looking most wretchedly. He told me, that about a month before, he got wet while riding, and continued for a considerable time in his wet clothes. Since then he never felt himself well, but still was not so ill as to confine himself to the house. What distressed him most was palpitation of the heart, and as he thought that this was a sure sign of heart disease, he dreaded seeing a medical man, lest he should be declared to be labouring under a disease which he believed was incurable; what led him to apply to me was, that he felt his symptoms considerably aggravated from having walked home from a dinner-party without his great coat two nights before. I found him, as I remarked, looking extremely ill; his expression indicated great distress. His respiration was quick; he could not make a full inspiration without feeling a sharp, lancinating pain in the left side, below the breast. All the left side of the chest, both anteriorly and posteriorly, was dull to percussion, and the respiration, wherever heard, was extremely feeble except along the posterior margin of the scapula. The heart beat strongly, but without any abnormal sound, and in its normal position. There was no apparent dilatation of the side. All the right side of the chest, both anteriorly and posteriorly, was clear to percussion. The respiration in it was weaker than natural, as it ordinarily is in the unaffected as well as the affected side in the earliest stage of pleuritis, when a full inspiration would cause pain, which the patient instinctively avoids, and when the small quantity of air admitted at each inspiration is compensated by the frequency of the act, until, the pain ceasing and effusion taking place and compressing the lung, puerile respiration now establishes itself in the other lung. The tongue was densely coated with a thick yellowish fur. The pulse was quick; there was no unusual heat of skin; I directed sixteen leeches to be applied to the side, and that he should have a mercurial purgative. The next day I found that the pain of the side had quite gone, and that the whole of the left side was more decidedly dull to percussion than on the

preceding day. This dull sound involved the whole side, both anteriorly and posteriorly. Inspiration was heard very feebly in the posterior superior region, and also inferiorly and externally below the mamma. There was neither ægophony nor bronchial respiration. There was no appreciable dilatation of the side. The heart was heard pulsating in its normal position. The respiration in the right side was now puerile; there was little doubt of there being extensive effusion into the left side. Still, there were some phenomena that caused some difficulty in the diagnosis. These were, the respiration being heard in certain parts where we should not have expected to have heard it in a case of simple effusion; again, the heart retaining its normal position, with such an amount of effusion as must necessarily be present to produce such an extent of dulness on percussion as existed. The history of the case supplied me with an explanation of these perplexing phenomena. I had no doubt that there had been two distinct attacks of inflammation of the side: the first dating itself from the wetting he got a month before, and to which he referred his first feelings of illness, among which palpitation of the heart was a prominent symptom. I conceived it highly probable that, in consequence of this inflammation, an adhesion formed between the external surface of the pericardium and the pleura lining the internal surface of the lung, and that this adhesion retained the heart in its normal place, which would otherwise have yielded to the pressure of the fluid, and have been displaced. I also referred the respiration that was heard to adhesive bands extending from one pleura to the other, and thus serving as conductors of it. The second attack, and which brought him under my notice was, as we before stated, of only two days' duration when I saw him. The circumstances, too, under which this attack arose, confirmed me in this opinion. He resided in Merrion-square, and had to entertain a party of gentlemen at dinner at an hotel in Sackville-street. We may presume, without any impeachment of his habitual sobriety, that he drank more wine than usual. He then walked home without a great coat. I would here remark how frequently I have observed inflammatory affections of the chest, and of an unhealthy character, to supervene on exposure to cold where the subjects had drank stimulating beverages, and not even to excess. An instance I saw in a gentleman, who, when heated in cricketing, drank champagne and lay on the grass; he got pleuro-pneumonia, which degenerated into gangrene of the lung, marked by extreme fetor both of the breath and expectoration. He ultimately completely recovered. To return to the case; he was directed to be cupped in the side, and was ordered mercury, to be taken internally. The side was afterwards blistered, and the blistered surface dressed with mercurial ointment. There was little or no alteration in the condition of the side for some time. The stethoscopic signs continued *in statu quo*. His constitutional symptoms were very unpromising; he became very much emaciated; and his strength seemed quite to fail. Dr. Stokes

saw him with me occasionally, and apprehended some malignant disease of the lung besides the pleuritic effusion, a suspicion that his general appearance, which was habitually bilious and sallow, was calculated to excite. I did not share in this suspicion, but connected the unfavourable constitutional symptoms with his gouty habit. We were now obliged to discontinue the internal exhibition of the mercury in consequence of the intestinal irritation that it caused. His condition was now so alarming, that Sir Philip Crampton and Dr. Stokes, who saw him with me, expressed themselves most unfavourably as to the probable issue. Although the prospect was most discouraging, I ventured to hope againt hope. Happily the mercurial dysentery quickly yielded to the means employed against it, and things having come to the worst, now appeared to assume a more favourable aspect. There seemed to be now, for the first time, some amendment in the chest affection, as indicated by the stethoscopic signs. The absorption of the effused fluid appeared to have begun. The clavicle sounded less dull to percussion. Diuretics were now directed for him, and acted most satisfactorily. The work of absorption went on steadily, and a feeble respiration was heard, from day to day, in a lower position, both anteriorly and posteriorly. The sound on percussion, too, was less dull. He now was able to lie down, and on the sound side, although hitherto he was obliged to remain constantly in the sitting posture. While matters were proceeding thus favourably, a new and unexpected phenomenon presented itself. His mind, that had hitherto been calm and collected, became very disturbed and excited. At first he had hallucinations like those of delirium tremens, and fancied that animals were running over him in bed, and provided himself with a stick to drive them away. When these delusions passed away, which they did in a few days, his mind became very much excited on the subject of his professional business. He would leave his bed at two or three o'clock in the morning to write long legal details and instructions for the Attorney-General to carry on prosecutions; a subject on which his mind was very anxious at the time his illness began. It was perfectly useless to try to persuade him that he ought to give up all thoughts of business. He persisted in writing his papers, which proved the very unsettled and unsound state of his mind. This state of things continuing for some days, and with no appearance of amendment, Sir Philip Crampton saw him, and concurred with me in opinion, that he should remove to Kingstown, so as to be out of the reach of all business. He gave it as his opinion, that the case would issue in permanent insanity. He went to Kingstown, but did not derive any benefit from it. He returned to his own house, and by very slow degrees his mind recovered itself. He had a most tedious convalescence, but his recovery was complete. He is now as competent for business as ever he was. The affected side of the chest is still dull to percussion, and the respiration feeble; it is also less in its dimensions than the opposite side. How are we to explain the cerebral

disturbance in this case? It came on at the moment the affection of the chest began to amend. Is it an alternation of morbid action, modified by the temperament of the individual—a man of an active and anxious mind? Had the gouty diathesis anything to say to the cerebral affection by any change it might have produced in the blood sent to the brain? These are questions that the case seems to suggest.

"The second case was that of a youth, Hugh Moore, aged 15, of a slight, delicate figure, a watchmaker by trade, admitted under my care into Sir Patrick Dun's Hospital, affected with painful swellings of the knees and ankles, and also complaining of pain in the cardiac region. The stethoscope indicated no abnormal sound of the heart; the pulse was very rapid; skin hot; tongue furred. Next day, in addition to preceding symptoms, there was dulness on percussion, and absence of respiration at the base of both lungs posteriorly. When he went on his hands and knees, with the body bent, the sound became clear, and respiration was heard in the posterior inferior right side, while the change of position produced no change in the phenomena of the postero-inferior left, where the sound continued dull and the respiration was bronchial. It was plainly a case of acute rheumatism, involving the joints and the heart, and causing effusion into the cavity of the right pleura and pneumonia of the left lung. He was bled to twelve ounces, and was ordered pills of calomel and opium: the blood was buffed and cupped. As he still felt pain in the cardiac region, twelve leeches were directed to be applied there. The pain disappeared, but there was an increase of dulness on percussion. I shall not enter into a more minute detail of the case, but content myself with stating that the mercury was continued till his mouth became sore, when all the symptoms which he first exhibited improved; his breathing became free, a friction murmur that was heard at the base of the heart disappeared, nor was there reason to suspect an adhesion of the pericardium. He was three weeks under my care when he exhibited a peculiar vacancy of expression of countenance, and remarkable dilatation of the pupils; and the next day he was reported to have been raving all night; pulse 114 in the minute; pupils greatly dilated. We directed arrow-root and wine for him. His friends now came and removed him from the hospital, alarmed by the wildness of his expression, and expecting no other event than his death, which they preferred to occur at home rather than at the hospital. At the end of a week they brought him back again, reporting that from the time he was removed from the hospital he never ceased to rave at night, while during the day he remained in a listless, stupid state. He now presented the following phenomena:—A marked vacancy and stolidity of expression; he answers questions slowly, but correctly; his pupils are greatly dilated; he had still some cough. I ordered for him decoction of Iceland moss and carbonate of ammonia, and directed a mutton chop for his dinner, and six ounces of wine. He slept well this night, and had no delirium.

Next morning he appeared more intelligent; his memory was much impaired; his emaciation extreme. I now substituted sulphate of quina for the carbonate of ammonia, and gave him generous diet. He gradually recovered his intelligence and strength, and at the end of a fortnight from his re-admission left the hospital comparatively restored to health. As we may regard treatment as a sort of test of the nature of disease, it might be concluded, from the success of the tonic treatment employed in this case as soon as the cerebral complication appeared, that this complication depended on the general debility, in which the brain bore its share, and which it exhibited in its deranged function. But the point to which I would direct attention is the time at which the delirium began, and which, being the same in the two cases, induced me to class them together, —when the chest affection began to improve. We might connect the delirium in the last case with the treatment that the urgency of the symptoms seemed to demand. But if this were the sole cause, would it not have followed more immediately, and not at a period so remote from when this treatment was employed? I cannot refer the delirium in the former case to the same cause, as there had been exceedingly little depletion employed. While we recognise an agreement between the two cases in the delirium coming on in both when the chest affection had improved, we see a difference between them in the nature of the cerebral disturbance that exhibited itself in each. In one, we suspect the quality of the blood and the moral temperament of the individual co-operated to give a peculiar character to the cerebral affection; while in the other we see the common and frequent effect of deficient supply of blood to the brain."

Dr. Neligan reported a case of intermittent fever in which the sulphate of bebeerina was employed with complete success. He prefaced the report by remarking on the interest at present attached to the discovery of substitutes for bark and its alkaloid quina, in consequence not alone of the high price and present scarcity of that valuable medicine, but from the probability of the supply of it completely failing at no distant period, owing to the reckless manner in which the cinchona trees in South America were destroyed while being stripped of their bark. Amongst the French especially this subject had excited great attention, ague prevailing much in that nation and in its new colony, Algeria; and the Academy of Medicine in Paris had recently proposed a prize for the discovery of the best substitute, to decide which a committee of that body was at present sitting. Dr. Neligan then remarked on the various drugs which had been used and proposed for the treatment of intermittent fever, referring, in particular, to the active principles of the willow—salicin, of black pepper—piperin, and of the greenheart tree of British Guiana (*Nectandra rodiei*)—bebeerina. The latter, he stated, he had used as a tonic and antiperiodic in numerous cases since it was first introduced into British medical practice in 1845 by his friend, Dr. Douglas Maclagan of Edinburgh; and in very few cases had its effects

disappointed him, but he had found it especially useful in diseases assuming a periodic character.

The case which Dr. Neligan was about to lay the particulars of before the Association was also interesting, from the great rarity of ague in Dublin for many years back; while in the commencement of this century, and previously, evidence existed to prove its great prevalence, and this was true of all Ireland as well as of Dublin. For the last ten years, during which time Dr. Neligan had been physician to Jervis-street Hospital, two cases only of ague were admitted into his wards, and in both the disease had been contracted in England.

"Thomas Keane, aged 37, a labourer, was admitted into Jervis-street Hospital, June 19, 1852, labouring under quotidian ague. He stated that twelve months ago, while working in England, in Cambridgeshire, during harvest time he was attacked with the disease in a slight form, when he was cured in a few days. He had no return until about a fortnight since, when he was suddenly seized with a shivering fit while at work in the hold of a corn vessel from the Black Sea. The fits daily became much increased in severity, and had recurred with the greatest regularity. Each fit lasted for about four hours, including the several stages. The fit recurs daily, but each day three hours earlier than on the one which preceded it, the interval being thus twenty-one and not twenty-four hours, and the intermission lasting for nineteen and not twenty-two hours. On admission he presented a pale, anemic appearance, with an anxious countenance; the pulse weak and compressible, the appetite bad, the tongue coated, and the bowels confined. He complained of great debility, and said that he had been rapidly losing flesh. On examination of the abdominal region, the spleen was found to be considerably enlarged, and the patient stated that he remarked his left side swell and become hard during the fit. The lungs, heart, and liver, appeared to be healthy.

"June 21st. He was ordered to have a warm bath, a turpentine enema to be administered, and to take a pill containing three grains of sulphate of bebeerina every three hours.

"22nd. Fit occurred, he states, at the regular hour, four o'clock in the evening; bowels still constipated. The bebeerina was directed to be omitted in order not to interfere with the fit, which Dr. Neligan wished to see him in.

"23rd. Fit recurred yesterday at 1 o'clock, and now, 10½ o'clock, A. M., he is in the shivering fit, which is of extreme severity, so much so as to shake his bed, and almost every bed in the ward. To have house medicine.

"24th. He had the fit this morning at 7 o'clock, A. M. The bebeerina was resumed with him in the same doses as at first.

"26th. No fit yesterday morning, but it commenced at 1 o'clock last night, the regular period, reckoning for yesterday's omission. He was now ordered to take a bolus containing thirty grains of the sulphate of bebeerina, and five grains of Dover's powder.

"29th. No fit for the last two days, but it recurred yesterday at

4 o'clock, P. M., still observing the same periodicity of intermission. Bolus to be repeated.

"30th. Recurred yesterday, but not until 7 o'clock in the evening, being thus protracted for six hours. Bolus to be repeated.

"July 2nd. No fit on the 30th; recurred yesterday at 4 o'clock, P. M., thus assuming a tertian type. Bolus repeated.

"3rd. 10 A. M. Bowels confined; feels the fit now coming on; it did occur, but its duration was short. To have two cathartic pills. Bolus repeated.

"5th. The fits have now assumed the tertian type with still three hours in advance. Bolus to be taken twice daily.

"7th. Report same as on the 5th. To continue the bolus.

"8th. Fit expected to-day at 5 P. M. Bolus to be taken at four, P. M.

"13th. No fit since; feels quite cured; has had no medicine for the last five days. Dismissed.

"The total quantity of the sulphate of bebeerina taken amounted to 372 grains."

In conclusion, Dr. Neligan remarked that the cure was permanent in this case, as he saw the patient within the last few days, and there had been no return of the fits since he left hospital. He also stated that he had never witnessed any effect from the use of bebeerina similar to that which follows the administration of large doses of quina, and which had been termed quinism, but which, however, had been observed in some cases by Dr. Maclagan. In a case at present under Dr. Neligan's care 558 grains of the sulphate of this alkaloid had been administered within eleven days, and no ill effect or unpleasant symptom resulted. It was a case of severe neuralgic pain in the left side, with periodical remissions, occurring in a man aged 55. The disease had been of three years' duration, and was removed by the use of this remedy. On the whole, Dr. Neligan's experience of this substitute for quina was most satisfactory.

Dr. Churchill then narrated, in the following words, a case of ramollissement of one lobe of the cerebellum, with induration of the other, occurring in a young boy:—"I confess I was not aware how rare this disease is until I had to make some researches on the subject. I find no notice of such an attack separate from softening of the brain in Morgagni or Barker, which did not much surprise me, but neither do Abercrombie, Rostan, Rokitanski, or Hasse, notice it more than casually, if at all. Entering very fully into the question of softening of the brain and spinal marrow, most of them omit all mention of the cerebellum; those who do mention the cerebellum as the seat of this change, only do so very cursorily.

"Dr. Gross in his valuable work, mentions a case in which the cerebellum participated in the softening which affected the greater portion of the cerebrum; and he quotes M. Durand Fardell's table, in which we find the cerebellum the seat of softening once in fifty-three cases.

"M. Lallemand relates several cases in which softening existed; in one there was headach, phrensy, convulsive movements, and death occurring suddenly; but in this case there was also an abscess of the cerebellum and ulceration of the dura mater.

"In a second, more simple case of complete ramollissement of the white substance only of the cerebellum,—the symptoms were, loss of consciousness, aphonia, paralysis of the right side, and afterwards a return of intelligence, and sensibility of the paralyzed side; pulse full, hard, and frequent, afterwards irregular; respiration free. Death on the eighth day.

"In a third case there was arachnitis and softening of both brain and cerebellum, so that it is impossible to separate the symptoms of the one diseased portion from those dependent upon the other.

"Dr. Gall considers priapism as a characteristic symptom of inflammation of the cerebellum, and others have mentioned disturbance of the respiration or retention of urine as very characteristic.

"I have just alluded very briefly to the rarity of this disease, to the little information to be obtained from books, and to the uncertainty of there being any peculiar symptoms, in order to show the difficulty of the diagnosis, and to excuse my bringing a single case before the Society. The report of the case is as follows:—W. Boyd, aged 10, had a fall last April, and struck the back of his head against a window frame; he vomited immediately, and complained of headach, which, however, soon subsided. For a little time afterwards he seemed quite well, but then began to complain of headach, chiefly in the morning, accompanied by nausea, and sometimes by vomiting. This recurred two or three times a week, the intervening days being marked by freedom from suffering. In other respects he felt pretty well; his bowels were regular, his tongue clean, but his appetite diminished, and he gradually became very thin. In August last I was requested to visit him, and I then received the foregoing history, and found his state as follows:—Great emaciation; tongue quite clean; abdomen flaccid, without pain or tenderness; bowels quite regular, and very rarely requiring medicine; pulse unusually slow, not above 50 or 54; respiration natural, neither hurried nor difficult; muscular power equal on either side; neither weakness nor loss of power in either extremity beyond what was the result of his reduced state. Neither priapism nor any affection of the bladder, nor any convulsive movements, was present.

"The only positive complaint was the headach, which came on almost every morning in paroxysms ending in vomiting, after which he got ease. The vomiting never preceded the headach, nor was present when the head was free from pain. During the intervals of ease he took his food, and occasionally sat up, walked about, and amused himself with books or toys. So far from any diminution of intelligence, he appeared to me unusually sensible and clear for a boy of his age. Such was his state when I first saw him, and such it continued with but slight variations to the end. The headach

continued, not constant nor even regular in its recurrence: for a few days it would come on every morning, then an interval of three or four days, during which our hopes of recovery would be raised. The seat of it varied, frequently at the back, especially at the beginning; it latterly extended round to the forehead, over one or both eyes, or was limited to the latter situation. When severe, light seemed to aggravate his sufferings; but what seemed singular, firm pressure upon the occiput and forehead always afforded relief. The intensity of the pain varied, but upon the whole it decreased as the disease advanced; at first it was so agonizing as to call forth piercing shrieks; latterly he uttered feeble but most distressing moans. It was invariably accompanied by vomiting, not at the commencement of the pain, but after it had lasted a short time. I took trouble to ascertain accurately that the vomiting or even nausea never preceded the pain. The matters ejected were sometimes, but not always, food that he had previously taken, mucus mixed with colourless or greenish fluid, and sometimes bile. After the pain and sickness had subsided he took a little food with relish, but notwithstanding the emaciation made steady progress until he was reduced literally to skin and bone. The pulse, which was unusually slow when I saw him first, became even slower in proportion as he got worse; it fell to 40 on one day, when he was worse than usual; but though slow, it was always perfectly regular. For two days at one period there appeared two new symptoms: 1. He complained that he saw double, the appearance of the eyes being quite natural, no squinting, and the pupils neither contracted nor dilated, but answering to light perfectly,—this lasted nearly two days; 2. A week or so after this he had something like spasmodic action of both arms, which subsided after a few hours. Both occurred a month or so before death. His mind continued very clear till the day, I might say the moment, of death. No convulsions, nor paralysis, nor dyspnœa, nor priapism, nor difficulty of voiding urine, occurred at any time. His tongue continued clean, and his bowels very regular.

"Under these circumstances I need not say that the diagnosis was very difficult; our impression was that there was organic disease, an abscess, or perhaps tubercle, but even this seemed doubtful occasionally when the pain assumed rather the character of neuralgia, and was reduced by pressure and opiates.

"I need not detail minutely the treatment, as it did no good. Leeches in the first instance, blisters, which relieved him more than anything, calomel, opium, hydriodate of potash, bark, &c., were tried, and generally with some benefit at first, but failing finally. He died Oct. 21, 1852.

"I was fortunate enough to obtain permission to examine the head, and my friend Dr. Hardy was so kind as to make the post-mortem examination for me.

"On removing the skull there appeared more vascular congestion than usual, and on the arachnoid, where it crosses the division between the hemispheres, there was a small amount of tubercular de-

posit, with local but limited vascularity. The substance of the cerebrum was firm and natural, with no unusual vascularity; in the ventricles was a quantity of clear serum, but not more than might be effused just before or after death.

"The right lobe of the cerebellum was considerably firmer than natural, and perhaps rather more vascular than usual. The left lobe, or the posterior half of it, was softened to the consistence of gruel; it had lost all tenacity of texture; its colour was a muddy grey, and all the tissues were equally involved. My friend, Dr. Lyons, kindly examined this part under the microscope, and found that it was simply the tissue of the cerebellum, with no mixture of pus or of any foreign deposit.

"Tracing back the history of the case, I think we may be justified in concluding that the blow on the back of the head gave rise to inflammation of the cerebellum, which in the one lobe ended in softening, in the other in induration, whether, as some have supposed, these two states be merely different stages of the same morbid condition. How far this case affords support to those who, with Rostan, Abercrombie, and others, consider ramollissement the result of inflammation, or with Dr. Bennett, that it is analogous to suppuration, the Association can decide for itself. The case appears to me of great interest from the paucity of symptoms, and from the absence of those which are considered pathognomonic of the disease."

Dr. Churchill also described two other cases, one of rupture of the vagina during labour, the uterus remaining intact; and the other a case of sudden death from peritonitis, caused by a very minute perforation of the intestine.

Third Meeting, January 15, 1853.

Dr. Banks brought under the notice of the Association the following case. A boy, aged 10 years, was admitted into the Hardwicke Hospital on the 12th of November last. The mother of the child informed Dr. Banks that his illness was only of three days' duration; he had not been, that she was aware of, exposed to cold, nor had he received an injury of any kind. A severe shivering ushered in the disease; the left leg and knee were then observed to be swollen, and exquisitely tender to the touch, the slightest movement causing excessive pain, as proved by his loud exclamations. When the patient was presented for admission at the Hospital he was evidently "in extremis;" countenance expressive of great suffering; pulse scarcely to be felt at the wrist; heart's action feeble and very rapid; respiration much embarrassed, and loud, moist râles audible over the whole chest; the left leg much enlarged, and of a dark livid hue. Death occurred in a few hours afterwards. On necroscopic examination, there was evidence of intense and universal bronchitis, and of extensive congestion of the lungs; specks of purulent matter existed in the tissue of these organs. A portion of the left tibia, which Dr. Banks exhibited to the Association, was denuded of its

periosteum, and rough on its surface, and a considerable quantity of pus, of a greenish colour, had been effused beneath the periosteum, which was much thickened and highly vascular.

Dr. Banks observed, that this case presented an example of a disease not very frequently met with in practice, which he looked upon as a form of diffuse inflammation,—a malady, the phenomena of which result from actual blood poisoning.

In an early volume of the Dublin Journal of Medical Science (First Series), the late Dr. M'Dowell published cases of the disease in question, with observations on its nature and progress. The cases were under Dr. M'Dowell's care in the Richmond Hospital. The subjects of the disease, according to this distinguished surgeon and accurate observer, are invariably young persons who have been exposed to cold, and who have been under the necessity of labouring to an extent unsuited to their years. Dr. M'Dowell's experience proved that the disease may be either idiopathic or sympathetic, and that it frequently runs a rapidly fatal course; of the accuracy of which observation the case which Dr. Banks detailed afforded a striking illustration.

Dr. Banks then exhibited to the Association a remarkable specimen of hypertrophy of the kidney. A man, aged 64, was admitted into the Hardwicke Hospital. He had been formerly addicted to intemperate habits, and latterly had been subjected to great privations. He stated that he had been only ten days ill, but his appearance indicated a more advanced stage of maculated typhus. On the fourth day after his admission, he fell into a semi-comatose condition, and the state of prostration became more marked. From the first it was necessary to employ the catheter, but little urine was secreted; it was high-coloured, and abounded in albumen. After three or four days there was a more copious secretion of urine, and a slight improvement manifested itself in the symptoms, but he soon lapsed into his former state, yet continued, with occasional and unexpected rallies, to linger until the end of the third week, when he was seized with severe and long-protracted rigors, followed by profuse sweating and coma. He died on the third day from the occurrence of the rigor. On examination of the body, all the viscera, with the exception of the kidneys, were found free from any lesion. The right kidney, which in the normal condition is generally the smaller, presented an example of enormous hypertrophy,—its weight being thirteen ounces. The capsule was strongly adherent; the cortical substance was in a state of hyperemia, but not otherwise different from that of a healthy kidney, the tubular portion dilated, and the ureter augmented in capacity, and vascular. The left kidney, or rather the remains of it, was a mere bag, containing a little thick purulent fluid: it weighed but three drachms. Dr. Banks deemed the morbid specimen worthy the attention of the Association, as affording a good exemplification of destruction of one kidney by purulent inflammation, and of the conservative power of nature in causing compensatory hypertrophy of the other.

Dr. W. Frazer exhibited some rare leguminous seeds, recently brought by Charles D. Campbell, M.D., from Creek Town, Old Calabar, Western Africa, which are termed by the natives "Eseré," and are employed by them as a mode of judicial trial by ordeal in cases of imputed or suspected crime, being popularly believed to have the marvellous property of proving fatal only to the guilty. They are stated to produce severe convulsions and speedy death unless when rapidly ejected by vomiting; and even this is said not always to afford certain protection. It is further stated, that the priests or judges can, in desirable instances, obtain acquittal, either by substituting other innocuous seeds for the Eseré, or by boiling it previous to its being used.

This is believed to be the first instance in which those seeds have reached Ireland; and through the kindness of Mr. Moore, the Curator to the Glasnevin Gardens, Dr. Frazer has succeeded in having some of the seeds raised, which it is hoped will flower this year.

To illustrate the injurious effects caused by some native leguminous plants, Dr. Frazer also detailed two instances of poisoning in children from eating the seeds of laburnum. In these cases, although only three or four seeds were eaten, they caused considerable giddiness, burning pain in the epigastrium, and vomiting; and the sufferers did not completely recover for two or three days.

Dr. Neligan read a paper, by Dr. Alfred Taylor of London, "On the Medical Evidence in the Case of W. B. Kirwan"[a].

Dr. Montgomery read the following account of a case of imperforate hymen. "On Monday, 3rd Jan., 1853, a young woman applied to me for advice, being, as she thought and was told, in a very hopeless condition. She said that she was about twenty years of age, and being a servant of all work in a public-house, had a great deal of laborious and incessant work to perform; that she suffered great agony from a lump in her belly, and from another which pressed down into and partly through the labia externa.

"On examination, there was seen and felt a distinct tumour, apparently about four inches in diameter, and rising out of the pelvis to a height of about six inches,—easily movable laterally, firm, but giving a slight feeling of resiliency when pressed between the hands, as if it were filled with some thick fluid; no fluctuation. On passing a finger into the rectum, at a short distance it came into contact with a tumour, quite filling up the hollow of the sacrum, and so firm that it might very readily be taken for an ordinary fibrous tumour. I now turned my attention to the vagina, to ascertain how this tumour might be related to that situation; but the finger could not be introduced at all, as it at once encountered a prominent tumour, inserted all round to the ostium vaginæ; and on exposing this to the eye, the first thing that caught the attention was the open orifice of the urethra at the upper point of the tu-

[a] Published in the Dublin Quarterly Journal of Medical Science, vol. xv. p. 94.

mour, and thrown forwards. The distended hymen was thick and vascular in its lower half and centre, but at each side there was a whitish-looking spot, without vessels, and very thin.

"I now found that pressure on the abdominal tumour was *soon*, but not instantaneously, followed by tension of the vaginal enlargement, and also of the tumour in the hollow of the sacrum. There was now no room for any further doubt as to the nature of the case,—that it was an accumulation of menstrual secretion pent up by an imperforate hymen. The breasts were full and firm, and the mammary veins distinct.

"I think I have seldom seen a case in which one would, at first sight, be more likely to form an erroneous judgment, or, if hasty, to give a more incorrect and damaging opinion.

"Through the kindness of Dr. A. Smith, she was accommodated with a bed in one of his wards in Sir Patrick Dun's Hospital, and with his assistance she was carefully examined. The bladder having been emptied by the catheter, she was placed on the edge of the bed, and an incision was made through the distended hymen, when immediately there flowed out a full stream of a thick fluid, in colour like chocolate, and of the consistence of thick tar. It was perfectly inodorous, and quickly showed a disposition to partial coagulation; the quantity which escaped must, I think, have amounted to a quart. Having come prepared with a curved gum-elastic catheter, immediately on making the incision through the hymen I introduced it through the opening, and in the direction of the abdominal tumour, and found that it passed at once to the depth of nine inches.

"Generally in these cases, when the fluid is let out, and the agent which had previously kept the uterus distended withdrawn, the latter organ almost immediately begins to contract, and expels the sanguineous accumulation forcibly, and often with severe pain. It was not so in this case; and about half the fluid had flowed away, under abdominal pressure, before the uterus began to contract,—this was, however, accompanied by pretty smart pain. The abdominal tumour immediately disappeared, and that in the hollow of the sacrum was no longer to be felt.

"After the operation, the patient went on most favourably, without any unpleasant symptom whatever. A week afterwards, Dr. Smith, finding the incision in the hymen disposed to contract too much, enlarged it freely, and on the 15th I could introduce my finger readily to the upper end of the vagina. The breasts had diminished in size, and the veins were much less distinct.

"The cause of the pain in these cases is the contractile efforts of the uterus to get rid of the accumulation within it; and when these contractions take place, the patient, in addition to the abdominal pain, is greatly distressed by the resulting pressure of this fluid against the hymen and vagina, giving, as this patient expressed it, the feeling 'as if her whole inside was going to be pushed out.'

"Moreover, these contractions are sometimes partial, affecting

only certain parcels of the uterine fibres; and in this way have, in some instances, produced motions so closely resembling those of the fœtal limbs as to have been mistaken for them; and when we remember that in these cases there is met with enlargement of the abdomen, swollen breasts, and morning sickness, it is not to be wondered at that the suspicion of pregnancy has been entertained, although altogether unjustly. And thus so experienced a practitioner as Dr. Dewees tells of himself, in relating a case of accumulation of menstrual fluid distending the uterus:—'While conducting this examination, I thought I distinctly perceived the motion of a fœtus.'—*Essays, &c.* p. 338."

FOURTH MEETING, FEBRUARY 2ND, 1853.

DR. HENRY KENNEDY read a brief notice of two cases of diabetes;—one, an instance of diabetes insipidus; and the second, of diabetes mellitus.

"CASE I.—Mr. ——, a general medical practitioner, residing at Birmingham, came under notice first in 1850. He was then forty years of age, and had been carrying on a most arduous practice in that town for thirteen years previously. When a boy of 10, and then residing in Ireland, he had been seized with a feverish attack from lying on wet grass, where he had fallen asleep. He did not recover well; and in a few weeks his parents observed he was affected with constant thirst, and that he passed much more water than natural. He was brought to Dublin (for he then lived in the county of Cavan), where the late Mr. Colles saw him, and thought so badly of his case, his general health being completely shattered, that he told his friends he need not be educated. Contrary to all expectation, he rallied, and when old enough became a medical practitioner, carrying on practice in Birmingham till he reached forty years of age, when, his means allowing of it, he came home; and then it was I first saw him. His health during all this time—that is, for thirty years—was never good, though he was able to go through the duties of his profession. His look was sallow and unhealthy; tongue furred, and mouth always clammy; pulse slow and weak; his appetite was above the average, and he had constant thirst, and always slept with a large supply of cold water at his bedside, drinking usually about four quarts in the day. Though commonly costive, he was occasionally subject to sharp attacks of diarrhœa: on two of these occasions there were signs of inflammation of the cæcum. His urine was passed several times each night; it was pale, and its specific gravity was about 1013. Dr. Head examined it minutely, but it contained neither sugar nor albumen. It is only necessary to add, that this case was cured literally within a fortnight. The medicine ordered was the dilute nitric acid, of which he took one drachm daily. He lost his life, however, several months subsequently from a gun-shot wound of the abdomen, received accidentally. It should be stated that this patient had previously used a great variety of treatment, without avail, both in this country and in England.

Case II.—This was given in the words of the patient himself. "I first consulted Dr. —— in London in 1851. He immediately forbad me sugar, vinegar, bread, cereal food, or anything containing sugar. He ordered me half-ounce doses of liquor potassæ three times a day, and which, in six weeks, caused an immense deposit of the sulphates in my urine,—its specific gravity being often as high as 1040. At this period I lost flesh at the rate of 7 lb. a fortnight, and was otherwise much reduced. I left off the medicine, found myself the better of having taken it, and shortly after became stationary in weight,—about sixteen stone. My diet at this time was very tiresome; and in August, 1851, I again saw Dr. ——, to try if he would alter it. He allowed me maccaroni, and a vegetable product called manna croup. I used these, and in addition ate bread very moderately, and also potatoes. When March, 1852, arrived, I found myself going back again; the urine heavier, and when tested with liquor potassæ fully as dark as the strongest coffee. I had been warned about the use of particular kinds of food, and since then have never tasted them; and my urine is now about 1022, and contains but a trace of sugar. My attention was first called to my own case by anomalous pains, which I could scarcely describe, and which were at first made light of. I had also a total loss of venereal appetite. The singular part of my case is, that I have never made an unusual quantity of urine; that it has its proper smell; and that I have not suffered from thirst or a dry skin; but the moment I eat cereal food the urine increases in specific gravity. I ought to state that the warm bath is part of the treatment, and this I use daily. A little brandy is the only good thing I take. I have never yet met any medical man who spoke of more than arresting a disease like mine: cures are said to have been performed, but there are none of a satisfactory kind."

Such was the patient's account of his own case. Dr. Kennedy then directed attention to the special points in it: 1st. The enormous doses of the liquor potassæ; 2nd. The absence of thirst; 3rd. The small quantity of urine passed; and 4th. The active state of the skin. He also took occasion to state that there are numerous authentic cases of cure on record, and referred particularly to the seventh volume of the Edinburgh Medical and Surgical Journal in proof of this. He also alluded to the recent important discoveries of Bernard, who had clearly shown that sugar could be elaborated by the system itself; and hence, that the idea of cutting off the supply of articles containing sugar must in future be much modified. In conclusion, it was suggested that an entire change of climate might suit cases of this intractable disease.

Dr. J. F. Duncan read "a brief notice of a case of moral insanity, unaccompanied by any obvious symptoms of intellectual aberration"[a].

[a] Published in the Journal of Psychological Medicine and Mental Pathology, edited by Forbes Winslow, M. D. No. xxii. p. 274.

Dr. Fitzpatrick detailed a case of that form of local paralysis which has received the name of "wrist drop." "Dr. Kirby," he remarked, "had lately published some observations on this disease in the Medical Press, and alluded to its rare occurrence in females, the subjects of it being generally men of dissipated habits. The following case was remarkable, as happening in a person of strictly regular habits of life.

"Mrs. ——, aged 26, but apparently older, of spare form and leucophlegmatic habit, and being in the ninth month of pregnancy, went to rest, in her usual good health, on the 21st of September, 1852. She was awakened early the following morning by the cry of one of her children, and arose for the purpose of attending him, when she was surprised and shocked at finding that she had completely lost the power of using the right hand.

"I saw her in the course of the day. The hand was in a complete state of paralysis, and dropped from the wrist; the powers of extension and flexion were lost, and along the back of the hand, and up two-thirds of the fore-arm, sensation was very much impaired, so that she could barely feel pinching of the skin. She complained of feeling numbness, weight, and cold in the hand and arm, but could with some difficulty raise the limb to the head; the pulse was of the same character as in the left wrist; no evidence of cerebral disease or spinal irritation existed, and the general health was good. I directed her to take some castor oil, to bathe the hand and arm in warm water containing salt, twice a day, friction to be then carefully employed, and a flannel bandage to be adjusted. This plan was adopted for three days, and then a liniment of soap liniment and turpentine was used, and a splint was applied to support the wrist-joint. No benefit having been derived from this treatment, a blister was applied, extending over the joint and four inches up the arm.

"October 2nd. Not the slightest improvement is observable; on the contrary, more complaint is made of feelings of weight and weariness in the arm, particularly towards night. Her accouchement being daily expected, I determined to give up the use of further treatment for the present. After a natural labour she was delivered of a son on the 10th of October.

"19th. Has gone on well since delivery, but there is no improvement in the paralytic symptoms; a liniment containing croton oil was directed to be applied to the part affected.

"22nd. The liniment produced a rash, not only where applied, but in several parts of the body, and was therefore discontinued. The following mixture was ordered: Compound decoction of aloes, and infusion of valerian, of each four ounces: an ounce to be taken twice a day.

"24th. The bowels were moderately acted on by the mixture; she is now able to move slightly the tips of the fingers, but this power does not exist in the thumb; she had been obliged to lay aside the splint, as it caused pain. At the suggestion of Dr. Fle-

ming, one made of Sparks' leather, sufficient to support the wrist-joint, leaving the fingers free, was substituted. An iron, heated by boiling water, was applied at short distances along the course of the nerves, from the humerus to the fingers. She was ordered to take half a grain of valerianate of zinc three times a day, and to continue the use of the mixture in such doses as would keep the bowels in a regular state.

"31st. Has been suffering from headach since yesterday; pulse natural, tongue clean. I ordered tartar emetic ointment to be rubbed along the cervical portion of the spine until irritation was produced.

"Nov. 5th. The heated iron has been regularly employed every second day, to the extent of producing vesication in some places. While the splint is on, the patient has the power of flexion in the fingers, to the extent of half an inch, but when it is removed, the hand drops, and is as powerless as before.

"I now suggested the use of electro-magnetism, but the patient expressed a great dread of the remedy, and would not consent to its adoption.

"8th. Sir Philip Crampton met me in consultation on the case, and recommended the following liniment: Sulphuric acid, one drachm and a half; olive oil, two ounces; oil of turpentine, two ounces and a half; mix: a teaspoonful to be rubbed for ten minutes, twice a day, on the back of the hand and fore-arm, until such irritation was caused as to prevent its further use, and then the process to be commenced on the fore-part.

"14th. She began with the liniment on the 10th inst.; a rash appeared yesterday, which is slightly painful. While the splint is on the wrist the power of flexion in the fingers is increased, and when it is removed, the hand does not drop so much as before, and the patient is sensible of a restoration of power in it.

"22nd. The powers of extension and flexion of the fingers and thumb restored. She can with ease hold the hand extended without the splint. The use of the liniment has been continued, but it produced no rash on the fore-part of the arm.

"30th. The only complaint now made is of slight weakness in the hand, for which I advised the cold douche. From this period the debility gradually lessened, and the hand was ultimately restored to its natural condition."

Dr. Fitzpatrick concluded by remarking, that it was a doubtful question what influence on the cure may have been produced by treatment previously to the use of the liniment. Certainly progressive improvement was not observed until after its application. The action of it appeared to be rather stimulant than irritant.

PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF DUBLIN.

THIRTEENTH SESSION.—1852-53.

Fatty Condition of the Liver.—Dr. Banon made the following communication to the Society:—I was requested to hold a post-mortem on the body of a gentleman who died somewhat unexpectedly on Wednesday last. I had some knowledge of this gentleman's history for a few years, and of the circumstances which preceded his death. He was for several years depending upon a rich relative, who allowed him sufficient means to commence, but not to conclude, the study of the medical profession, and from the disappointment resulting from this cause he became addicted to intemperate habits, which he retained up to the period of his death. His relative died about two years ago, leaving him an independent property, which had no other effect than to render him a more confirmed dram-drinker than ever. He now seldom consumed less than a quart of ardent spirits in the twenty-four hours, and for the last twelve months of his life had lost all appetite for food, had become irritable, and obstinately refused to diminish the quantity of whisky which he consumed daily. He had several attacks of delirium tremens, and more than one of epilepsy; he had also violent pains in the feet and ankles, and became unable to walk. About nine days previous to his death his friends observing a black spot on the ball of the great toe of the right foot, and a dark-coloured vesicle a little distance from it, requested me to visit him. I found him confined to his bed, not much emaciated, but presenting a peculiarly haggard appearance; everything he swallowed was immediately rejected from his stomach,—even the whisky, a bottle of which constantly stood by his bedside, was not retained. The heart's action was weak, but there was no abnormal sound. The lungs were healthy, and his intellect was perfect. He complained of slight tenderness over the region of the liver, and diarrhœa had recently set in. Having prescribed for him a mixture calculated to relieve the irritable state of the stomach, and given directions as to the treatment of the gangrenous spots on his foot, I left him, and did not again see him during life.

He died without the slightest struggle, those about him believing him to have fallen into a quiet sleep. I examined the body about thirty-six hours after death, along with my friend Mr. Adams. The surface was slightly jaundiced, and a considerable quantity of fatty structure was found beneath the skin of the chest and abdomen. The lungs were perfectly sound; the heart was flabby and presented also a fatty appearance. The stomach and the intestinal canal generally presented a more vascular appearance than usual. The liver was of a deep yellow colour, the size of the organ greatly

increased; its consistence, too, was much softer than in the healthy state; and on careful examination it was found to have undergone the greasy or fatty degeneration; its tissue was tinged with bile. There was no portal obstruction, and the fibrous matrix had become much attenuated, presenting a striking contrast to the appearance presented in cases of cirrhosis.—*February* 26, 1853.

Disease of the Aortic Valves.—Dr. Banks observed—The patient whose case I am going to detail was a young man aged 29, admitted into the Whitworth Hospital on the 22nd of last month. He stated that his habits of life were regular, and that he never had any rheumatic affection. Early in last December, after straining himself in lifting a heavy weight, he experienced pain behind the sternum, and thenceforward frequently found his breathing short on any slight exertion. He remained at work until the beginning of last month, suffering from frequent and severe fits of difficulty of breathing and pain, which gradually became more and more intense. Sixteen nights before his admission he became quite unable to lie down, and any attempt to do so brought on the pain and dyspnœa. His appearance was anemic, his face puffed and pallid, his eyes prominent, the conjunctiva glistening and pearly, and there was slight œdema about the ankles. On percussing the chest, I found the area of dulness greatly increased, and the apex of the heart placed considerably to the left of its normal position, and lower down than natural. With the exception of a crepitus in the base of the lung, the respiratory murmur was healthy. A loud bellows murmur, propagated along the aorta, was heard at the base of the heart; at the top of the sternum it resembled the *bruit de scie* or *bruit de râpe*, and was much rougher than ordinary in cases of insufficiency of the aortic valves. At the apex of the heart there was a loud but small bellows sound, and at the top of the sternum a slight amount of dulness. He never had hemoptysis, but had suffered from dysphagia before his admission.

He continued without much change up to the 3rd of this month, about ten o'clock in the evening of which he was seized with great difficulty of breathing, and a feeling of suffocation, with severe pain in the chest; on a former occasion it resembled angina pectoris, the pain in the sternum shooting through the chest and sometimes into the left shoulder. He continued in this state, bordering on suffocation, for nearly an hour, when he expired. During this period he emitted a large quantity of bloody froth from the mouth. On examining the body, we found the heart very much enlarged; there was considerable hypertrophy, with dilatation of the left ventricle. A circle of bony matter was deposited round the origin of the aorta, and the aorta itself was dilated, and on pouring water into it the valves were found incapable of preventing regurgitation. They were thickened, and in one of them a hard fibrous mass of large size was deposited.—*March* 5, 1853.

Protrusion of the Omentum.—Mr. Adams said—I beg leave to

lay before the meeting the details of a very remarkable case of protrusion of the omentum from the cavity of the abdomen.

The protrusion in this instance did not occur in any of the ordinary situations for hernia, but the omentum, uncovered by any sac, was seen (when the patient was admitted into the Richmond Hospital) to have descended from the orifice of the anus between the limbs, so far as nearly to reach the popliteal spaces. The history of the case is as follows :

Jane Rice, aged 50, was admitted into the Richmond Hospital, under my care, at one o'clock on the morning of the 22nd of October, 1852. The case was reported to be of that urgent nature as to require my attendance at the hospital at night. I found the woman lying on her side, and when the bedclothes were raised up and the nates exposed, a mass of the omentum, about eighteen inches in length and two inches and a half in breadth, presented itself; it had a shining, membranous surface, and was of a pinkish colour. Dr. Sinclair, Assistant Physician of the Lying-in Hospital, accompanied the patient to the Richmond Hospital, and was kind enough to give me a history of the case. He stated that the woman had first been transmitted, by mistake, to the Lying-in Hospital; that he there made a special examination of the patient. He said that the finger, introduced per vaginam, reached the os uteri, which was found natural; the anterior wall of the vagina was perfect, as well as the posterior wall and recto-vaginal septum. At the orifice, however, of the vagina, there was a well-marked cicatrix, the result of laceration, which had occurred at her first confinement, about thirty years ago. Dr. Sinclair further stated, that he satisfied himself that the protruded omentum had no connexion whatever with the canal of the vagina, but that it plainly proceeded from the cavity of the rectum, and passed out through the anal orifice. That on introducing the finger alongside of the protruded omentum, into the rectum, it was found that above the anus the omentum became narrower, rather pediculated, and just as high as the finger could reach, the pediculated portion could be traced to have come through an opening in the walls of the rectum, situated towards the left and posterior aspect of the gut. The edge of this aperture was abrupt, well defined, and of a semicircular form. Dr. Sinclair considered it to be a portion of altered omentum protruded through an opening, which was situated (so far as the finger could discover) to the left side of the rectum, and slightly posteriorly. He imagined that if the finger could be introduced a little higher, the opening in the rectum should be found to correspond to the lowest portion of the recto-vaginal *cul de sac* of the peritoneum.

As to the origin of this protrusion, it was supposed by the woman herself to be the consequence of her first confinement. At this time a laceration had occurred at the orifice of the vagina. Ever since this period she had been suffering some inconvenience, caused by something which occasionally protruded, as it were "her body coming down;" but that this was merely an inconvenience,

and there was nothing in it whatever to alarm her, until the evening of the day of her application to the hospital. On this evening, when she was going quickly down stairs, her foot slipped, and she made a violent effort to recover her balance, and then it was that this matter, which ordinarily came down but a little, suddenly descended to a great amount, upon which she became faint, vomited, and was immediately seized with great pain, and under these circumstances was, under an erroneous view of her case, transmitted first to the Lying-in Hospital, and subsequently to the Richmond by Dr. Sinclair. The patient stated that the structure now down felt exactly similar to that which ordinarily protruded for many years, and differed only in the circumstance of the great extent of the protrusion.

On reflecting on the representations of the case made by Dr. Sinclair, and finding that she had no urgent symptoms just then, I merely directed that fomentations and leeches should be applied to the abdomen, which was done accordingly.

On the following morning, Wednesday, 22nd of October, a consultation of the surgeons of the hospital was held on the case, the result of which was, that it was deemed imprudent to interfere surgically with it. There was now no sickness of the stomach, and the inflamed action of the peritoneum and intestines was trifling. We felt convinced, indeed, that the omentum was in a state of strangulation; at the same time we felt, that if the structure were divided we should not then be without fears that there might be a difficulty experienced in replacing the protruded part; or, supposing this last effected, we foresaw that it was by no means impossible that some of the intestines might force their way out through the aperture; or if, supposing the operation performed, and that none of these circumstances occurred, still an opening should remain through which the air would penetrate, and be followed by the passage of the ordinary contents of the rectum into the cavity of the peritoneum, which, it is needless to say, must be necessarily fatal.

It was considered, therefore, more prudent to leave the case to nature and to palliative measures, than to have recourse to any surgical operation.

We considered it probable that the ligature (placed as it were by nature) on the omentum, at the very point of its protrusion from the peritoneal cavity, would effectually strangulate and cause the death of the omentum, and thus would the patient be rid of the protruded part, the vitality of which we believed had already suffered much from exposure for many hours.

The patient lay in bed on her side, and the protruded part was smeared with the linimentum calcis compositum; it was directed that leeches should be applied to the epigastric region should acute abdominal pains be complained of.

From day to day the patient appeared to suffer less uneasiness; she lay upon her side, and the protruded part gradually withered, and on the seventh day sloughed off. The finger introduced into

the rectum discovered that this intestine was now empty. The edges of the ring through which the omentum had protruded could now be felt as before; but the foramen, as far as could be discovered by the touch, seemed stopped up.

All her uneasiness had disappeared, and did not return so long as she remained in bed; but she still found, on getting up and walking about, the same tendency to protrusion, or, as it were, "her body coming down," existed as before, and she feels instinctively the necessity of being very cautious in all her movements.

It is now six weeks since the occurrence of the rectal protrusion for which she was admitted into the Richmond Hospital; she was yesterday discharged, as she felt anxious to return to her home; she declared that she felt herself quite as well as she has done for the last twenty years.

Observations.—In endeavouring to account for the protrusion, we must conclude that a perforation through all the tunics of the anterior and left wall of the rectum, at a point about four inches above the opening of the anus, and in the immediate vicinity of the recto-vaginal *cul de sac* of the peritoneum, must have occurred; and by this opening the cavity of the rectum, and that of the sac of the peritoneum, were put in direct communication with each other.

The engagement of the lower extremity of the omentum into this opening of communication must be looked upon as a happy interposition, thus closing up the aperture and preventing fatal consequences; but the question arises, how did the perforation of the rectum, and direct communication between the cavity of the intestines and that of the peritoneal cavity, occur? In the preceding history of the case, the circumstance of the woman's having suffered much in her first confinement is much dwelt upon, but what has been the mechanism? It is not proved that this severe labour had anything to do with what subsequently occurred, namely, the protrusion of the omentum. It is very true that the external orifice of the vagina had been ruptured, and that the laceration extended through a portion of the peritoneum towards the anus during the labour referred to; but there was no evidence that the upper part of the vagina, near the recto-vaginal *cul de sac* of the peritoneum, had ever suffered injury during labour; indeed, if it had, a protrusion into the cavity of the vagina should have occurred, instead of that observed in this case.

Happily, we have not had any means of ascertaining anatomically the precise nature of the lesion which existed in the coats of the rectum, nor do we know whether the ulceration we presume to have occurred had originated in the serous or mucous coat of the intestine. The situation of the perforation we know to be about four inches above its anal opening, and we can infer that the perforation into the cavity of the peritoneum through which the omentum passed must correspond exactly to the lowest point of the recto-vaginal *cul de sac* of this membrane.

The case appears to me to be a novel one, and well worthy of being recorded.

The two drawings, and the portion of sloughed omentum, have been preserved in the collection of the Richmond Hospital Museum. —*March* 12, 1853.

Pneumonia.—Dr. Banks observed, that the patient from whom the specimens were taken was a man, aged 64, a labourer, admitted into Sir Patrick Dun's Hospital on the 2nd of this month. On the Sunday previous he suffered from headach, shivering, and sickness of stomach; and on admission complained of great prostration of strength. He had no cough or pain in the chest, but on observing that a crop of herpes existed about his mouth, and knowing its frequent co-existence with pneumonia, especially when the latter is present as an epidemic, my attention was attracted to the chest, and I found the base of the right lung dull on percussion, with crepitus. He was suffering from great debility, and his pulse was 120. On the second day after his admission, the whole of the right lung had become dull on percussion; bronchial respiration and bronchophony existed; the pulse was 120, and much weaker, and the respiration was 40. On examining the lungs, there was a remarkable tympanitic resonance over the whole of the antero-superior portion of the right lung. The following day crepitus was heard over the situation where this remarkable phenomenon had existed; the tympanitic sound was best heard by a light, smart percussion. The physical signs continued to the fourth evening after his admission, up to which time he gradually sank, and died on the following morning. On opening the chest, I found that the right lung had been the seat of universal solidification; it occupied a very great extent of the chest; it crossed the mesian line, covered the heart, and overlapped a portion of the opposite lung; it was solid from its apex to its base, with the exception of the lower edge of the inferior lobe, which was emphysematous. There was no purulent infiltration; the left lung was healthy; in the heart fibrinous clots were found in both ventricles, extending into the pulmonary artery and into the aorta.

Dr. Stokes informs us that he saw one case of typhoid pneumonia in which tympanitic resonance occurred at the apex of the left lung, and continued for some days; and he alludes to another, in which it was supposed to have existed at the base of the lung. In the latter, however, the resonance was due to a solidified lung lying over a stomach distended with air. In the former it was owing to the existence of a large cavity. Dr. Graves first called attention to the occurrence of tympanitic resonance in pneumonia. I cannot account for its existence in the present case; it was not so remarkable shortly before death as it had previously been.—*March* 19, 1853.

Disease of the Aortic Valves.—Dr. Banks also brought forward the case of a woman, aged 40, who was admitted on the 7th of last month

into Sir Patrick Dun's Hospital. She was a servant, and had continued at work up to last Christmas, when, for the first time, she suffered from shortness of breathing and palpitation of her heart on making any slight exertion. About the same time also she observed some swelling about her ankles; she had never suffered from rheumatism. At the time of her admission, her general symptoms were, great dyspnœa and inability to remain in a recumbent posture; œdema of the lower extremities, and visible pulsation of the superficial arteries; that of the radial artery could be seen at some distance. On examining the heart, a double *bruit* was heard both at base and apex of the organ, but much louder at the base, exceedingly rough in its character, and not unlike the friction sound heard in pericarditis, but it was distinctly endocardial, and partook somewhat of the character of the *bruit de scie;* it extended along the aorta, rough, but not musical. The area of cardiac dulness was greatly increased; and at the base of the lung a coarse crepitus was audible. The orthopnœa, for the difficulty of breathing amounted to this, was paroxysmal. She was frequently relieved by ether, and more especially by chloric ether. She died on last evening, and on examination the heart was found greatly increased in size, and its cavities dilated. The aortic opening was permanently patent, and a large irregular vegetation was connected with the posterior valve. The mitral valves, also, were thickened, and allowed of regurgitation in a slight degree.—*March* 19, 1853.

Suppurative Inflammation of the Liver; Ulceration of the Intestines.—Dr. M'Dowel exhibited the recent specimens, and gave the following account of the case:—

The patient, who was a female, and of middle age, was admitted into the Whitworth Hospital April 7, 1853. She had been visited a short time previously by Dr. O'Flaherty, who recognised the existence of an hepatic abscess, and advised her removal to hospital. When she was brought to the hospital she was greatly exhausted; her expression was indicative of much and of long-continued suffering. She was in a state bordering on collapse, with cold extremities, and a failing pulse. She complained of intense pain in the left side catching her breath. She was too much exhausted for any very accurate examination, but a large elastic tumour, of a globular form, was very manifest in the right hypochondrium, projecting beneath the costal cartilages of the right side. She had laboured under obstinate diarrhœa for a considerable time, and was greatly emaciated. The diarrhœa continued after her admission, and the discharges were passed involuntarily. Stimulants and opium were prescribed, but she died sixteen hours afterwards.

Post-mortem Examination.—The right lobe of the liver was hollowed out by an immense irregular cavern, containing pus and sloughy cellular tissue. Of the former at least three pints escaped when the cavity was cut into. A portion of this abscess constituted the globular tumour felt in the right hypochondrium, and in which

fluctuation was perceived during life. A very thin layer of hepatic structure bounded the abscess here; but although its coverings were so very thin in this direction, and the abscess so accessible by external incision, yet no adhesion of the peritoneum had taken place.

The puncture of the tumour from without would, consequently, have led to the effusion of its contents into the serous cavity of the abdomen. More superiorly adhesions had formed where the diaphragm and the liver are in close proximity. The left lobe was perfectly healthy. There was recent pleuritis on the left side. The spleen was in a normal state. In some cases inflammatory lesions of the spleen have produced secondary abscess of the liver.

Being aware that, in these countries at least, abscess of the liver, as a primary disease, is not very frequently met with; and availing ourselves of Dr. Budd's researches on the connexion between hepatic abscess and lesions of the intestinal mucous membrane, we instituted a careful examination of the whole gastro-enteric mucous surface. The result was, that numerous ulcers, of a circular form, with elevated edges, were discovered in the cæcum, and in the first portions of the colon. The surfaces of the ileo-cæcal valve were ulcerated. From the appearance of the lower end of the ileum, externally, we were led to infer that ulcers would also be found in its interior; for several coils of this intestine were united together by bands of lymph, whilst their outer surface appeared preternaturally vascular. Accordingly, on laying open this intestine, an ulcer was found which had penetrated the mucous and muscular coats as far as the serous membrane, where perforation was prevented by adhesive inflammation being established. Dr. M'Dowel observed, that in this case suppuration in the liver was secondary to disease of the glandulæ solitariæ of the intestinal mucous membrane. The explanation of its occurrence under such circumstances is not difficult:—the morbid matters, generated by the diseased condition of the mucous membrane, being absorbed by the radicles of the portal veins, and so carried to the liver, by which an inflammation of a diffuse or suppurative character is set up. In a large proportion of the cases referred to by Dr. Budd, abscess of the liver was thus supposed to depend on ulceration of the intestines.—*April* 2, 1853.

Apoplexy ; Hypertrophy of the left Cavities of the Heart.—Dr. M'Dowel detailed the following case, and exhibited the recent specimens:

A man about fifty years of age, and of robust appearance, was suddenly attacked with apoplexy on the previous day (April 1st). He had come in from Rathmines to his office, and whilst attending to some business he suddenly fell down and became immediately insensible. He was removed to the Whitworth Hospital soon afterwards.

On admission, the symptoms were like those observed in cases of poisoning by opium; the face was pale and not distorted; the

eyelids closed, the pupils much contracted and insensible to light; the left eye appeared rather more prominent than the right; pulse 72, and compressible; the bladder was distended with urine, which was drawn off by a catheter. There was complete coma, and the surface was colder than natural. Stimulants were administered both by the rectum and the mouth, and counter-irritation sedulously employed. Twenty minutes afterwards the pupils were observed to be slowly dilating, and then convulsions quickly supervened; the pulse now became very slow and small. Death occurred five hours after the first seizure.

Post-mortem Examination.—The surface of the brain appeared congested, and its cavities were distended with a great quantity of blood, partly fluid and partly coagulated. A large rent existed in the side of the right optic thalamus, where it forms the lateral boundary of the third ventricle, and it appeared that hemorrhage had first occurred into the optic thalamus; that the blood subsequently escaped by rupture into the third ventricle, and from thence flowed into the lateral and fourth ventricles. The rush of blood had broken through the fornix and velum interpositum. The clot formed a complete mould of the third and fourth ventricles and of the aqueduct of Silvius. The blood in the left ventricle was nearly fluid.

The arteries at the base of the brain were in a diseased condition; spots of atheroma were visible in the basilar artery and in its principal branches.

The heart was extremely large and heavy. A great disproportion existed between its two sides. The right cavities, which were natural as to size, seemed but appendages to those of the left side, so great was the hypertrophy of the left ventricle. All the valves were healthy. The lungs were free from disease, as was also the liver, but the kidneys were enlarged, softer than natural, and pale.

Dr. M'Dowel observed, that every case which illustrated the connexion between cardiac and cerebral disease was of much interest. Some pathologists still doubt the influence of hypertrophy in producing cerebral hemorrhage (Walshe), but the case which he had just detailed supported the opposite opinion.

In it is to be recognised a disproportion between the propelling power of the heart and the power of resistance of the blood-vessels, resulting in a rupture of some of the cerebral arteries. As contrasted with this case, he would allude to those instances (which are of more frequent occurrence, and of which several have been presented to the Pathological Society), in which the brain suffers injury from an interruption to its due supply of arterial blood; as for example, in certain cases of mitral regurgitation. But in such cases the morbid changes in the brain are of a different nature, and essentially consist in a softening of the cerebral substance, to which the hemorrhage is often consecutive. Dr. Law's researches on this subject were most valuable.—*April* 2, 1853.

Cancerous Tumour in the Posterior Mediastinum.—Dr. M'Dowel exhibited a specimen obtained from the body of a man of middle age, who had been admitted on the previous Tuesday, under his care, into the Whitworth Hospital. He was then labouring under intense dypsnœa; his lips were livid, and his countenance ghastly and sunken; he had frequent cough, with pain in the left side, and copious frothy expectoration; the chest was slightly dull over the part where pain was complained of, but resonant elsewhere; sibilant and loose crepitant râles were heard all over both lungs; treatment afforded but temporary relief, and he died three days after his admission into the hospital.

Autopsy.—The lungs were distended with air; there was no pneumonic consolidation, and every portion floated lightly in water. On cutting into the lungs, they were found gorged with bloody serum; there was also much pulmonary congestion, which, like the serous infiltration, existed almost equally in every portion of both lungs: it was not, therefore, hypostatic. The bronchial tubes were filled with thin, frothy mucus, and a cancerous mass, engaging the bronchial glands, surrounded the bifurcation of the trachea, and involved the walls of that tube, which were in part blended with the tumour. The caliber of the bronchi at their origins was sensibly diminished.

There was hypertrophy of the heart, with dilatation and traces of antecedent pericarditis. The specimen illustrated the case of pericarditis without adhesion; for though a distinct layer of false membrane, capable of being raised from the subjacent serous structure, was spread uniformly over both auricles, yet no adhesion had taken place. There was recent pleuritis on the right side. There was "Bright's disease" of the kidney (with which he associated the morbid condition of the heart and pericardium) and cancerous infiltration of the submucous tissue at the pylorus, producing incipient stricture of that orifice. The mucous membrane of the stomach presented evidences of the most intense inflammation. It was of a bright red colour and villous appearance, whilst flakes of lymph were spread in large patches over a considerable portion of its surface. These changes were most conspicuous in the left extremity of the organ; and, what is very remarkable, they had been unaccompanied by any of the usual signs of gastritis.

In his observations on this case, Dr. M'Dowel said:—I believe that the changes in the lungs, which were the immediate cause of death, depended on the mechanical obstruction in the bronchi. It is one of the great doctrines of modern physiology, that the movement of the blood in the capillaries is not dependent on the *vis a tergo* of the heart, but is maintained by a force generated by the capillary circulation itself. This force in the systemic capillaries is dependent on the affinity between the blood and the different tissues,—each tissue attracting to itself the particular element in the blood needed for its due nutrition. In the lungs, this attraction is represented by the affinity which the venous blood has for oxygen introduced by respiration. The venous blood and the air in the

pulmonary cells have a mutual attraction, which is satisfied by the exchange of oxygen and carbonic acid which takes place through the walls of the capillaries; and when the blood has become arterialized, it no longer has any attraction for the air: therefore, venous blood will drive the arterial before it in the pulmonary capillaries while respiration is properly going on; but if the supply of oxygen be interrupted, so that the blood is no longer aërated, an interruption of the movement of the blood through the pulmonary capillaries is the result,—the pulmonary circulation becomes retarded, and congestion and serous effusion will be the results.

Dr. M'Dowel said, that in the present case the due supply of oxygen was interrupted by the mechanical pressure exercised by a cancerous tumour in the trachea; and in corroboration of the views then advanced he referred to the fact already mentioned, that every portion of both lungs seemed to be equally affected. Changes similar to those now described are met with in cases where aneurismal tumours compress one of the bronchi or the trachea. In such, the physical conditions are manifestly the same as in the preceding case.—*April* 9, 1853.

PROCEEDINGS OF THE DUBLIN OBSTETRICAL SOCIETY.

SESSION 1852–53.

Fourth Meeting, Thursday, 24th February, 1853.

Dr. Carte exhibited to the Society an interesting preparation of the female generative organs in a pregnant state, taken from the body of the *Halichœrus griseus.*

He dwelt at some length upon the natural history of the phocidæ, or seals, and stated that Cuvier assigned to them the third order of the class Mammalia, named by him *Carnassiers*, and which he has subdivided into three great sub-orders, viz.—1. Cheiroptera: bats; 2. Insectivora: hedgehog, shrew, mole, &c.; and 3. Carnivora: bears, &c.; this last family being further divided into three subfamilies, viz.—1. The Plantigrade; 2. The Digitigrade; and 3. The Amphibiæ; and that, in this classification, the seals were placed at the head of the last sub-family, the Amphibiæ, but of course inferior to the terrestrial Carnivora. He enumerated the various materials for the study of the anatomist and physiologist furnished by this interesting and useful animal: such as the great venous sinuses, first described by Houston; the peculiar arrangement of the sclerotic coat of the eye, as described by Blumenbach, in the Greenland or Harp variety, and which served as the basis of his theory to account for the adaptation of the eye, as an optical instrument, to different

media and distances; the valve in the fauces; the great extent of the olfactory mucous membrane; the distribution and size of the nerves supplying the lips, &c.; and then read the following account of the female generative organs:—

"On examining the external parts of generation, the vulva, or urethro-sexual opening, is found to be very capacious, in close proximity, but anterior to the anus, one muscle encircling both outlets, and forming a common sphincter; deeper seated, the vagina and rectum are merely separated by some loose cellular tissue and fat. Immediately within the verge of the urethro-sexual opening, and on its anterior wall, the clitoris lies in a small semilunar depression (preputium clitoridis); this organ, like its analogue, the penis of the male, is capable of erection during sexual excitement. In shape, the clitoris resembles a diminutive tongue; it is denticulated on its free edge (the glans), but in this instance is destitute of the bony support which exists in the penis of the male. This is another exception to the rule, viz.—'When the intromittent organ of the male is provided with a bony support, the rudiment of one is generally found in the clitoris of the female: thus, for instance, it exists in both sexes in the bear, the cat, and the otter; still, though present in the penis of the dog and civet, it is not found in the bitch nor in the female civet. In the lioness, racoon, and marmot, the clitoris contains a bone like that belonging to the penis of the males of the same species; and amongst the Monotremata and Marsupialia, the clitoris, like the penis, is surmounted with a bifid glans. In the *Loris gracilis*, or *Stenops tardigradus*, the clitoris is of a very large size, and the urethra—as first pointed out by Daubenton—runs forward and opens at its anterior extremity between the branches of its glans, imitating in this point of structure the penis of the male.'

"In this particular, then, the seal appears to resemble the dog; and another proof of this similarity may be drawn from the fact that the penis of the male seal is furnished with the musculi compressores venæ dorsalis, like the dog; which muscles, long and thick, meet in a tendon over the dorsal vein, where the vessel runs under the arch of the pubis.

"In the marsupial animals the clitoris lies in a preputial recess, and is simple in those whose males have a simple glans penis, but bifid in those whose males possess a bifid glans, as in the opossum.

"Proceeding from the clitoris, a median *raphè* extends a short distance along the urethro-sexual canal, having two small eminences separated by a shallow groove or furrow: these eminences appear to be the rudiments of the labiæ minores or nymphæ; in other respects, the mucous membrane of this canal is smooth, except at its verge, where it is thrown into circular folds by the action of the sphincter muscle. At its upper extremity there is a well-defined, constricted circle of fimbriated mucous membrane, which is particularly prominent on the anterior wall, where it forms a soft, fleshy eminence. This arrangement, on superficial view, might be mis-

taken for the os tincæ. On the right side of this protuberance the urethra opens by a slit-like orifice, which leads to a pyriform bladder by a straight urethra of about three and a half inches in length, situated in the median line of the anterior wall of the vagina.

"From the apex of the bladder the urachus is continued towards the umbilicus; and its peritoneal reflections, or false ligaments, extend on each side as far as the round ligaments of the uterus. The mucous membrane of the *vagina proper*, though smooth on its surface, nevertheless is disposed in longitudinal plicæ; and this part of the canal may be said to commence at the fleshy eminence described above, on which is situated the orifice of the urethra. In the young or immature female, this circular constriction separates the urethro-sexual canal from the true vagina, which in the adult is broken by numerous fissures into prominent folds, resembling corpora myrtiformes; and this is the analogue of the hymen. The os uteri terminates the vagina proper: its lips project considerably into this canal, the posterior one being much the larger of the two.

"The body of the uterus is seen to extend for about three inches, and then it divides into two cornua, which pass off towards each iliac region: these cornua are united for some distance in the median line before they open into the corpus uteri, and consequently appear to give a greater length to the body of the uterus, when viewed externally, than really exists internally. On examining the uterine cavity, that of the right or impregnated cornu is found of an ovoid form, of considerable size as compared with the left, its walls thinned by distention, and its mucous surface completely devoid of longitudinal rugæ, so well marked in the left or unimpregnated horn.

"Each cornu is terminated by the ovary of its own side, and is enclosed in a duplicature of the peritoneum, somewhat similar to the disposition of the same organ in some of the Ruminantia, as, for instance, the camel. These capsules strongly resemble the tunica vaginalis testis of the male. At the upper and posterior aspect of the ovarian capsule there is a large, round opening, at the superior segment of which circular opening the fimbriated extremity of the Fallopian tube commences: it is above and behind the ovary, in close relation to it, but in no way joined to this organ by its duct, except during the act of impregnation, when it grasps the ovary, and permits the passage of the ovum along its canal to the uterus; whereas in Marsupials (as the kangaroo) the ovaries are lodged within the expanded orifice of the oviduct, called the pavillion, and in the wombat, according to Owen, it is enclosed with the pavillion in a peritoneal capsule.

"To facilitate the passage of the ovum in the present instance, the orifice of the Fallopian tube is situated in the centre of the fimbriæ; its trumpet-shaped extremity rather suddenly contracts to a very fine canal, which runs in a diagonal direction from the upper and outer border of each peritoneal capsule to its lower and inner part, and in this course each Fallopian tube lies between the layers

of the peritoneal capsules in front of the ovaries, and terminates by an exceedingly small orifice near the apex of each cornu. The ovaries are somewhat reniform, and about the size of small walnuts; a section of the impregnated one discloses a well-marked corpus luteum.

"From the upper and posterior part of each capsule, a long, flat band extends as far as the diaphragm, to which it is connected merely by the peritoneum. These bands consist of a peculiar semi-elastic tissue, intermingled with non-striated fibres, and differing in both these respects from voluntary muscular fibre. They are inserted into the ribs, nearly at right angles to the fibres of the diaphragm. I conceive the use of these bands to be, in the first place, to support the uterus, for it appears, as it were, slung between them like a hammock; and secondly, when we consider the relative position they bear to the round ligaments—being external and opposed to *them*—we find that the whole uterus is placed in the centre of four forces, two acting from the ribs, and two from the pubis; by this means the uterus is kept in a quiescent state: and as these bands have in their composition more or less elastic tissue, when the uterus ascends, they are enabled to contract, and when it descends, to elongate; and this apparatus is absolutely necessary when we consider the peculiar habits of the seal, at one time in water, at another basking on the rocks: in the former element its motions are easy and natural, but on land it is ludicrously awkward, where it progresses by means of a kind of shambling gait or short saltations; and under such circumstances, if the uterus were only supported in the ordinary way, it would be liable to violent shocks, to the detriment of its contained fœtus."

Dr. Toler reported the case of a woman to whom he had been called some time since, in consequence of alarming symptoms having arisen during a tedious labour (her second). On his arrival, he found that rupture of the uterus had taken place. Version was performed, and the head with some difficulty brought through the brim, depending on contraction of its conjugate diameter. Under the treatment pursued this woman recovered. Her first labour had been tedious: the child now two years' old. Ten months having elapsed since she had been under Dr. Toler's care, she called to inform him that she was four months pregnant, and asked his advice. She was recommended to go to the Dublin Lying-in Hospital, and submit to the operation of induction of premature labour at the seventh month, but her clergyman would not allow her to consent to this, and she determined to abide her full time. Fortunately for her, labour came on without external intervention at the seventh month, and she was safely and naturally delivered of a dead child. A year subsequent to this she again presented herself, and informed Dr. Toler that she was six months gone with child, when he repeated the advice he gave to her on the former occasion; but a veto similar to the last was put against induction at the seventh month, and no more was

heard of her until she was in labour at the full term, when her husband came for Dr. Toler, but he declined the attendance, inasmuch as his advice had not been followed. The result of this, her fourth labour, was rupture of the uterus, which terminated fatally.

Dr. Atthill (Assistant to the Rotundo Hospital) detailed the particulars of two cases which had recently occurred in the Rotundo Hospital. The first was that of a woman who, having been delivered of a child at three o'clock in the afternoon, was brought into hospital at eleven o'clock on the same night with a second child in utero. On examination, he found both hands protruding from the vulva; and on following up the right arm, which was the most anterior, the *edge* of its scapula was felt over the right sacro-iliac synchondrosis. The back proved to be right across the brim, in the oblique diameter; the breech occupying a situation above the left acetabulum, and the other shoulder to the left of the promontory of the sacrum.

The uterus was firmly compressed round the child, but the relaxed state of the parts from the prior delivery, and the absence of strong pains, determined him to have recourse to turning, which was accomplished without much difficulty, the patient being placed under the influence of chloroform. The child, on delivery, gasped once or twice, but all efforts failed to establish respiration fully.

Dr. Atthill did not believe the presentation in this case to have been originally as he found it, and he tried to prove at some length, from the peculiar position of the fœtus at the brim, that it was caused by ill-directed efforts of the nurse (under whose care the patient was prior to admission into hospital) at turning, who, finding an arm or elbow presenting, brought down the other arm instead of the lower extremity. Of this, however, he had no positive proof, inasmuch as he could gain no information whatever from the patient concerning her labour anterior to her reception, she having evidently abstained from affording the same, in order to shield the nurse. This patient recovered without a bad symptom.

The second case was one of dropsy of the amnion, in a woman aged 33.

On admission, her appearance immediately attracted attention, the abdomen being enormously distended, and found to be excessively tense, with distinct fluctuation all over it, so that no outline of the uterus could be traced.

By vaginal examination the membranes were felt through the os, which was dilated to the size of a penny-piece; they were extremely tense, and this tenseness was not rendered more so by the uterine action; the os itself was rigid.

The membranes in this case gave way suddenly, and an enormous quantity of liquor amnii was discharged; the bed was saturated, and the floor flooded therewith. Immediately after this the abdominal parietes were found quite flaccid, the uterus firmly contracted, and so small, it seemed almost impossible that a fœtus was contained

therein. Vaginal examination set this at rest, for a small, irregular mass could be felt at the brim, which was diagnosed to be a malformed head, and in a few minutes the diagnosis was verified by the birth of an acephaloid monster.

The placenta proved to be morbidly adherent, and it was found necessary to introduce the hand to remove it. The patient went on well, and was discharged on the ninth day.

Dr. Atthill called attention to the great degree of distention which the uterus underwent, without suffering actual injury or impairment of its contractile power when once relieved of the distending fluid; and proceeded at some length to show how efficient a cause of delay in the first stage of labour over-distention was: concluding by remarking that this case confirmed the statement of Ramsbotham, viz., "That an acephalous fœtus and an adherent placenta were occasionally found in connexion with an inordinate secretion of liquor amnii."

Fifth Meeting, Thursday, 31st of March, 1853.

Dr. Hardy read the following paper on the paralytic affections of the extremities of infants and children. "Until a few years ago these affections met with but slight attention from writers on the diseases of early life. That such complaints are worthy of our most attentive consideration will, I trust, appear from the cases I am about to lay before the Society.

"Case I.—*Congenital Paralysis combined with Idiocy.*—B. G., a male infant, of strumous parents, born 25th Nov., 1847, large, and apparently healthy. During infancy he had but little activity of body; his countenance was dull and heavy; the limbs were moved without energy; and his head was permitted to roll about more than is usual with young infants. He took but slight notice of his nurse or mother, though he was evidently familiar with the voices of his attendants, but could not keep his eyes on any one of them for the shortest space of time, rolling them constantly about, or looking upwards or directly downwards in a vacant manner. As he advanced in age the motions of his right hand and arm were performed awkwardly; he could not grasp properly, and always turned his thumb into the hollow of his hand; when placed with his feet on the ground he made no attempt to walk, but allowed his legs to remain nearly motionless; from the loins upwards he moved freely and rapidly, bending and straightening himself. He was possessed with a great appetite, and the development of his body seemed to keep pace with it for the first two years of his life. Except crying, no other noise escaped from him save a peculiar hoarse and whining sound, which he gave vent to when either pleased or displeased. Dancing him up and down in the air gave him a good deal of pleasure, and caused him to express himself pleased by means of that peculiar sound just mentioned. He had frequent convulsive jerks of the head forwards and downwards, which seemed to distress him

much for a few seconds, and these spasmodic jerks were sometimes repeated, the second coming on immediately after the first; owing to the spasms he could not be allowed to lie on the ground (he was not able to sit up), as he might dash his face against anything near to him. He frequently passed water without giving notice, but his nurse understood him so well, that the actions of the bowels were performed regularly and naturally. The lower limbs first showed signs of wasting, being so little used, and besides, they seemed more affected with paralysis than the arms; but during his third year, the last of his life, his lower limbs wasted greatly, and this was the more apparent inasmuch as he was then growing tall. His tongue was nearly always turning about outside his mouth while he chewed it, allowing the saliva to flow down. I attended this child during several attacks of illness, and during the greater part of his life I had constant opportunities of watching the progress of his malady. His parents were most anxious for his improvement, and consulted many medical men, hoping for something, as they said, 'to make him bright.' They procured for him the apparatus termed a 'baby jumper,' in which he seemed to enjoy himself a good deal. Nothing was omitted which afforded the least hope of improving his functions so far as the paralytic affections and mental development were concerned, but all to no purpose; and in his last year of life so much did his countenance and general appearance bear the index of his disease that his father and many of his relatives were convinced improvement was out of the question. Hooping-cough was deemed the most likely infantile disease to terminate this child's existence should he escape ordinary affections; and in the autumn of 1850, having been seized with that complaint, he expired during a fit of coughing.

"On post-mortem examination several ounces of serous effusion were discovered in the ventricles, with extensive growths of tubercle in the membranes and substance of the brain, whilst the brain itself was small.

"There are several remarkable circumstances connected with the history of this child. He was the second of his parents, the first having been a very delicate female, remarkable for quickness and intelligence, but after some months of ill health she died of hydrocephalus. The head in her case was examined and found to contain a large quantity of fluid, whilst tubercles were observed in the cerebral membrane, and the cerebrum was rather larger than was natural in a child three years old. These two children were wet-nursed by their mother, who, in consequence of a very delicate constitution, performed the task but badly. The third child was wet-nursed by a strong, healthy woman, and though born a puny infant, he grew up a tolerably robust boy; the fourth has also grown up strong and healthy. The four children lived nearly altogether in the country, a few miles from Dublin, and were similarly circumstanced in every respect, with the exception of the first

two having been suckled by their mother, whilst the third and fourth had the benefit of a sound wet-nurse.

"Case II.—T. F., a fine lively male child, the fourth of his parents, born the 1st of June, 1852, strong and healthy. Three months after birth his lower limbs were observed gradually to lose their power of motion, although until then they had been perfectly strong and free in their movements, and the child's health was good. No treatment was adopted for a month after the first symptoms exhibited themselves, and then he was brought to the Institution for the Diseases of Children.

"On examination the body and limbs were found firm, full, well formed, and perfectly developed; when placed on his mother's knee the legs hung motionless, and there was no power of either drawing them up to the body or of straightening them; if the feet were tickled the child was rendered uneasy, but could not remove from the annoyance; sensibility was to all appearance perfect, not increased.

"The treatment consisted in alterative aperients, in which turpentine formed a part, also iron as a tonic, &c., while frictions were applied to the spine and limbs, and the douche-bath frequently employed. In the course of a few weeks the left leg was decidedly improved, being well under the influence of the will, but the right was *in statu quo*. The electro-magnetic chain having been suggested, the child's mother was anxious for a trial thereof; but after its application for some weeks she could not perceive any improvement, and laid it aside. The child is still under treatment, and is now able to move the right leg better; it is also able to withdraw the foot when the sole is tickled, and on bending the knee there is the sensation of resistance communicated to the hand; the muscles of the leg are soft and flabby, but its length and development keep pace with that of the left; just now there is a copious eruption on the head of eczema, and a little on the lower part of the trunk and limbs, which, as the teeth are cutting through the gums, I am not anxious to dry up. On March 28th it is noted that he makes a much better attempt at walking.

"Case III.—C. M., aged four years, a delicate female child residing in town, had measles in a very mild form, and recovered favourably in December, 1851. On the 17th of March following she was again placed under my care, when I was informed that shortly after her convalescence from measles she began to lose strength; her appetite failed, and she presented the appearance of general delicacy, without any accompanying symptom, until the end of February, when it was perceived that she was unable to walk as well as usual. On this account a medical practitioner was consulted, by whose directions she was sent to the country, with instructions to have the limbs rubbed with a liniment, and to take some of the muriated tincture of iron. On examination I found that she could not support herself on her lower extremities, and only attempted to walk when held up by the shoulders; she then dragged her legs along and placed her toes first

on the ground when fixing her feet. Every two or three minutes, while sitting quietly on a sofa, she complained very much of a tingling sensation in the legs which she called 'sleepy;' she then grasped them with her hands, and presented very much the appearance of a person suffering a good deal. She was exceedingly irritable and peevish; the tongue was foul; the breath offensive; though the bowels were moved daily, yet the alvine discharges were unhealthy; pulse small, quick, and weak; countenance pale and anxious. Under the use of occasional alterative doses of gray powder, with quina and iron in different forms, and cod-liver oil, her appetite improved considerably, and she gained strength. The twitchings in her limbs were at first greatly relieved, and at length quite removed by warm fomentations, to which were added counter-irritation by liniments and blisters to the spine. This treatment was continued steadily until the beginning of April with marked benefit, so much so, that she was able to walk tolerably well, and seemed quite restored from the paralytic affection. Shortly after this it was observed that she was rather dull, and had become drowsy, which latter symptom increased notwithstanding the use of blisters, &c.; and finally, becoming more and more insensible until the last few days of her life, during which she seemed to suffer from sharp pain in the head, causing her to scream violently at intervals. The bowels now acted involuntarily; the pupils were widely dilated and motionless; pulse very small, quick, and feeble. In this state she lay up to the 13th of April, when violent convulsions supervened, occurring at intervals during the last day and night of her existence. I regret to say no post-mortem was permitted.

"It may be remarked that two children of this family died very early, one of hydrocephalus, the other of fungoid disease of the kidney. The parents were healthy.

"Case IV.—M. O., a fine, healthy, female child, living in the country, had never suffered ill health of any kind whatsoever till the age of fifteen months. On the 23rd of October, 1850, her countenance was observed to present a heavy appearance, and in about an hour after this state was first noticed (2 o'clock, P. M.) she was seized with convulsions, and, notwithstanding various remedies promptly applied, they continued up to 11 o'clock at night, the fits running into each other without decided intervals, so that there appeared to be but one seizure from beginning to end. During the convulsions, the right arm and leg were moved violently, but the extremities of the left side remained motionless; the eyes were open and in constant motion; pupils widely dilated; profuse perspiration all over the body; pulse very rapid. The bowels had been open freely in the morning, but it was deemed necessary to keep up their action by the administration of some calomel followed by castor oil: as soon as the convulsions ceased she fell asleep.

"On the next day, 23rd, it was reported that she had slept well; tongue clean; bowels moved several times; motions passedof dark colour; abdomen soft; temperature natural; pulse very rapid, 160,

and small. She seemed heavy and inclined to sleep; she was perfectly conscious; she occasionally tossed about her right arm and leg, but the left extremities were quite paralyzed; the face had a twisted appearance, as if in a similar state, although such was not the case. It may be here mentioned, that she had six teeth prior to her present illness, and on the day she was seized with convulsions any that were protruding the gums were cut down upon. Mercury was now had recourse to, both internally and applied by friction; blisters to the head, and fomentations frequently to the limbs.

"On the 26th she had the advantage of a wet-nurse, and this way of taking nourishment she preferred to any other.

"On the 30th she could move the paralyzed leg when tickled, but the affected arm remained as before, though her hand was capable of grasping a little when irritated. In all respects she was improved: pulse steadily coming down, and gums a little touched with mercury.

"Nov. 30th. For the last few days the warm douche bath was used, and found most beneficial to the affected limbs. At this date she was able to move them freely, and a very good attempt was made at walking. She had continued the use of the breast-milk, along with other forms of nourishment, ever since.

"On December 6th she was able to walk a little: motion in the affected limbs was nearly restored; and the arm, though occasionally allowed to hang, could be used at pleasure.

"Before she had acquired proper power over her hand, she frequently seemed vexed at its inability to perform acts in accordance with her will, and in order to render it obedient she was accustomed, now and then, to resort to the use of chastisement, applied by the sound (the right) hand. Her general appearance was now healthy: she was in good condition, and preferred the breast-milk to any other food.

"From this date she was most carefully watched by her mother, and every precaution adopted likely to prevent a recurrence of convulsions: a constant discharge was kept up by blisters or issues, and as each tooth projected the gum it was freely cut down upon.

"March 6th, 1851. For one or two days prior to this date she was again observed to be heavy, and her mother not being able to pay her due attention, she was seized with a convulsion, but had only one fit. While the messenger was coming for me, her father, in order to save time, shaved her head and gave her a warm bath, and when I reached the house she was asleep.

"Under the use of the remedies before mentioned she soon got well.

"The next report I have taken bears date January 21st, 1853, a few days previous to which day she complained of very severe pain in the right side of her head, near the posterior half of the right parietal bone; and in about two days after this symptom her left hand was partially paralyzed, and her face had the expression of suffering, the brows being corrugated. Her mother at that time gave

her a warm bath, and applied a blister along the right side of her head. When I saw her I found she made a very feeble effort at grasping with the left hand, and her expression was not natural: her head felt hotter over the seat of pain than in other situations. By the application of a few leeches over the painful region of the head, followed by blistering and occasional doses of gray powder, her hand regained its usual power, and on the 10th of February she was altogether better, though not quite free from an expression of heaviness. Blisters were continued, also the gray powder, and she took some cod-liver oil and sulphate of quina. I frequently directed the iodide of iron, but was obliged to omit it, inasmuch as it caused her to be more irritable than usual, and feverish during its administration.

"Feb. 23rd. On the evening of this day she appeared rather heavy, knitted her brows a good deal, and while walking down stairs she complained of pain in her left leg. On this day, during her play with her brothers and sisters, she suddenly struck one of them (owing to a state of irritability, which was always observed by her parents as an indication of approaching convulsions). Soon after, she fell asleep, in which state she remained for about an hour, and on awaking was seized with one of the most violent fits of convulsions that she ever had since her first attack when an infant. She continued to work in convulsions (notwithstanding all the efforts made by her friends to stop the fits) till I arrived. They had given her a warm bath; cold had been applied to her head, and leeches to her feet, without effect. It was my intention to have applied a sinapism to the nape of the neck, but when rubbing some vinegar over the part beforehand she suddenly got rid of the fit, owing to the irritation produced by its coming in contact with an excoriated portion of the skin, to which a liniment had been rubbed a few days previously. She had no repetition of the convulsions, and in a few minutes she fell into a calm sleep.

"Next morning I found her perfectly herself, but for some days after there was considerable quickness of pulse. When she had so far recovered as to bear change of air, I had her sent some miles from home.

"The last time I saw her was on the 21st of March; she was then fat, lively, and playful, having entirely lost the frowning expression before alluded to. She continues to have a discharge kept up from the head by an occasional blister, and is using cod-liver oil.

"The arrangement of infantile paralysis into three classes, by Dr. West, will be found very convenient and useful. In the first class are included instances of congenital paralysis; in the second, those in which it is accompanied or followed by convulsions or other symptoms of cerebral disorder; and in the third are placed those cases in which paralysis occurs without indication of cerebral disease.

"The Case No. I. of those which I have just recorded was attended

with much obscurity, owing to the sad complication of idiocy. The child at birth, on account of its great size, was considered a very 'fine one;' but after a little its movements were observed to be awkward, and it was a matter of difficulty to determine whether the paralytic symptoms existed when born, or evinced themselves soon after birth,—the difficulty arising from the weak state of intellect; but from full consideration of the case, I am under the impression that it was certainly congenital. In Dr. West's published lectures he mentions a case which in many respects was very similar to this (No. I.). In his case, paralysis existed from earliest infancy; it had not succeeded to a fit; sensation was unimpaired; and the intellect was deficient. In my case the constitution was more at fault: the child, born of strumous parents, and, nursed by its unhealthy mother, was but ill prepared to battle against the difficulties of so complicated a malady. The very first step taken, viz., that of permitting the mother to nurse it, was most injudicious: in proof of the correctness of which opinion it is only necessary to observe the great similarity in the appearances found after this child's death and those observed at his sister's autopsy,—serous effusion and tubercular development existing in each. On the other hand, the advantages derived from obtaining the services of a healthy wet-nurse are well exemplified in this family, where two children, in every respect similarly strumous in constitution, are rendered to all appearance strong and healthy thereby.

"The second case comes under Dr. West's third form of the disease, viz., 'Those in which the paralysis occurred without any indication of cerebral disease.'

"In a paper read before this Society by Dr. Henry Kennedy, in the year 1840, and which is published in the Dublin Medical Press of September 27th, 1841, he has so accurately and fully described the complaint that I cannot do better than quote his words. He says,—'The first, and probably the most common, form of this disease is the following:—An infant at the breast is observed to have lost the power of moving an extremity, most frequently the upper. The mother states that it comes on suddenly; that the child had been put to sleep in perfect health, but on awaking that it had lost the power of moving the arm. When you come to examine, you find the arm quite motionless; you may raise it, but the minute it is let go it will drop to the side; nothing will induce the child to stir it, nor indeed do I believe it has the power to do so. . . . . In addition to being paralyzed, it may be in a state of exquisite sensibility.'

"The cause of the affection is found to depend either upon a deranged state of the bowels, or the irritation consequent on dentition. Brisk purgatives and alteratives are the means found most likely to restore the limb to its usual power. If the teeth cause the irritation, the gums should be freely and frequently divided down to the tooth. Should the case be likely to prove tedious, friction along the spine, over the abdomen, and on the affected parts,

together with the warm douche, electricity, and tonics, should be used. It is desirable that paralysis occurring in infants should be removed as speedily as possible, otherwise the development of the affected members will not keep pace with that of the sound ones, from want of use. Cases of this kind should be examined with considerable care, inasmuch as they are liable to be mistaken for injuries, the mother supposing the child to have received ill-treatment from its nurse, or to have fallen out of her arms.

"The third case reported affords an example of what may be termed the dregs of measles in a strumous constitution, and it fully explains why medical men look forward with so much anxiety to the approach of rubeola in children of a scrofulous diathesis, the lurking evil so often choses this state as its most fitting opportunity for developing the seeds of death, which until now had lain dormant. The first case detailed afforded also an example of the truth of this; and in the fourth we have one in which disease decidedly is now just ready, and may at that particular period break forth.

"When one child of a family has been carried off by hydrocephalus, and delicacy is seen to exist in the next, measures should be resorted to at once, with a view (if possible) to avert the dreaded calamity; and as a first great principle,—one which has been fully borne out by experience,—the services of a strong, healthy wet-nurse should be obtained; next to this in importance is the establishment of a permanent drain, by means of a seton or issue, from some convenient part, until the critical age has passed; and, if possible, the child should have a warm country residence. I may here mention, that in a family in this city where hydrocephalus prevailed, those children only were spared in whom the precaution of keeping up a constant discharge by seton or issue was adopted.

"There are several circumstances worthy of note in the fourth case: the child had passed through a great portion of the time of dentition; it was weaned, and all through life had enjoyed most perfect health until the seizure of convulsions, which came on so suddenly, lasted for so long a time, and left her in a state of paralysis. In the management of the case, I was glad to have obtained the services of a wet-nurse, as some of the most troublesome of her teeth were still to come, and I believed this to be one of the most effectual means of preventing a recurrence of the attack, having in other instances proved its efficacy, particularly in a case where the child (a boy) had convulsions during dentition, in whom I was able to ward off the fits so long as he continued to use breast-milk, but no sooner was the nursing discontinued than they returned. Under the use of the warm douche, both limbs seemed to derive more benefit than from all other local applications; the means adopted for conveying the stream being a common garden watering-pot, with a gum-elastic tube attached, to the end of which tube a stopcock was fitted: and in order to give sufficient force, this vessel was suspended from a high ceiling.

"Some time was allowed to elapse after this child had her full complement of teeth before the discharge was stopped, which had been instituted by means of a seton in the arm, and the occasional application of a blister to the head. Her health then seeming to be fully established, her friends thought such troublesome measures might be dispensed with, and accordingly left off their use: unfortunately, however, a recurrence of convulsions convinced them that the step they had taken was premature, and the counter-irritation was consequently resumed.

"The last attack, which took place on the 23rd of February, made me fear for her safety: it was one of the most severe convulsions she had, and was attended with several unpleasant and suspicious symptoms, such as pain and heat in the head, quick pulse, partial paralysis, and great irritability. She has, however, so completely recovered from its effects that I still hope for ultimate restoration, provided that she escapes from those complaints already alluded to, viz., measles, hooping-cough, &c. The benefit derived from the exhibition of cod-liver oil in cases that have fallen under my observation has led me to hope for great improvement in the present instance from its use.

"The remarks by Dr. Johnson, in his essay on Hooping-cough[a], show how dangerous convulsions are to children in that disease during dentition; and although this child has passed that period of infantile life, yet, having suffered so frequently from convulsions, I very much dread in her the advent of this disease. Under the division 'Hooping-cough complicated with Convulsions or Hydrocephalus,' Dr. Johnson says: 'Every one who has seen much of hooping-cough is aware that when it occurs during the period of dentition it is frequently accompanied by convulsions, and that they are among the principal sources of danger at that age. It is said that a child may be carried off by one of the convulsions; this, however, rarely happens. After their frequent return the case may pass into hydrocephalus.' If in the above instance hooping-cough should unfortunately make its appearance, I purpose resorting to the steady employment of chloroform, which has not only the power of arresting the paroxysm, but frequently contributes to the production of tranquil sleep after the fit, and of shortening the duration of the disease. It may be administered with safety at first by spilling a little of it on the hand of the mother or nurse, who can then hold it before the child's face when the cough is approaching. Its rapidity of evaporating, when thus used, prevents the risk of inspiring too large a quantity; but after they have acquired sufficient experience the usual means for inhalation may be adopted.

"The last case I have to detail is one in which paralysis followed as the result of external violence.

"Case V.—W. C., aged seven years, a strong-looking boy residing

[a] Cyclopædia of Practical Medicine.

in the country, at the sea-side, was brought to the Institution for the Diseases of Children (on the 2nd of April, 1853), by his mother, who made the following statement :—Seven weeks since, while in perfect health, and engaged at play, he was thrown down upon his side, and 'fallen upon,' when down, by some of his playmates. The injury received at the time did not seem to signify, nor was any symptom observed until ten days after the accident, when it was found that he was incapable of opening his hand to take bread from his mother, and his gait at the same time was imperfectly accomplished. Nothing was done to him in the way of treatment till he was brought to the Institution. On examination, the right hand was found to hang; he could not open or grasp with it, neither could he straighten it on the fore-arm when the arm was raised. When walking, he permitted the foot to drop on the ground from want of muscular power, and he was unable to point the toes upwards. Sensation in the affected limbs was increased, and he frequently complained to his mother of a tingling sensation, which gave him much uneasiness. The muscular development had not suffered, the affected limb appearing as large and full as the sound one. His general health was to all appearance good, with the exception of an inflamed state of the conjunctiva of the right eye. Tongue clean; appetite good. The treatment pursued was the administration of two grains and a half each of rhubarb and gray powder every second night, with syrup of the iodide of iron during the day; warm salt-water douches to the spine and paralyzed limb, and a splint under the hand so as to keep it in a line with the fore-arm, which was supported in a sling.

"April 18th. He could walk nearly perfectly; could open, grasp with, and extend the hand on the fore-arm. In every respect his recovery seemed certain.

"This case (V.) is remarkable, as exhibiting the result of timely treatment. It may be observed that from the first symptom of paralysis making its appearance, the disease steadily increased till treatment was adopted, from which time the boy made rapid improvement.

"Having already noticed the advantages derived from the douche bath, I need only observe how useful it is to resort to the application of a splint. In the case just detailed it fulfilled a most important object in retaining the muscles in their proper position. In adjusting the splint, care should be taken not to extend the fingers on it, but to allow the support to reach only so far as the commencement of the phalanges, in order that the patient may have freedom enough to permit of his making endeavours to move the fingers.

"Since this paper was brought before the Society, the opportunity has occurred of testing the plan of treatment I had determined on when speaking of Case No. IV. This child had been attacked with hooping-cough, ushered in by a convulsion of an hour's duration, still

not so severe as some of her former seizures. The next day the disease presented its characteristic features. I had instructed her nurse, who on the approach of a paroxysm applied a handkerchief, wet with a little chloroform, sufficiently near to allow of the vapour being inhaled. The result was, that the cough was rendered so exceedingly mild and short in its paroxysm as to be of no annoyance. It was found unnecessary to cause stupor, or anything approaching to that state, the mere inhalation of the vapour during a few inspirations being sufficient to bring about the satisfactory result. Previous to this treatment the cough presented its usual features, and just before the paroxysm the child was remarkably dull and heavy; but since the administration of the chloroform she has become as lively and playful as in perfect health. It is worthy of remark that, while all the children of this family (an infant excepted) passed through measles, this child, though constantly in contact with the others, resisted the disease. This may be accounted for in the following manner:—On the 13th of April she was in a shop in town, where a child who had hooping-cough was standing some short time. From this period she was not in any way brought in contact again with the disease. On the 1st of May measles had made its appearance in the family. She was presumed to be sickening for them, in consequence of her showing symptoms of catarrh (such as watery eye, &c.), but no other evidence, save that of slight cold, appeared. The convulsive seizure came on, the day previous to the cough assuming the peculiar characteristics of pertussis; namely, on the 19th of May."

A Case of Placenta Prævia, in which Galvanism was employed. With Remarks. By W. Boyle Chavasse, Resident Surgeon-Accoucheur of the General Dispensary, Birmingham[a].

On March 21st I was called to see Ellen Brittain, who was reported to be flooding violently. She was a poor, half-starved woman; her husband had been out of work for six months, and now only earned six shillings a week by hawking oysters; with this sum he subsisted and lodged his family, comprising three adults. This was her sixth pregnancy; she was about eight months gone; had commenced flooding a month before, and since then had flooded four times. She was ghastly pale, with white, blanched lips, sighing respiration, cold extremities, no radial pulse, in fact, almost *in articulo mortis*. I gave her immediately a glass of hot brandy and water, and ordered hot irons, wrapped in flannel, to be placed near her feet and legs. I then proceeded to examine the uterus; her bed-clothes and night-dress were saturated with blood; the vagina contained many clots,

[a] Communicated to the Medico-Chirurgical Society of Queen's College, Birmingham.

and a slow oozing was still going on. The uterus was baggy and flaccid; the os was dilated to little more than the size of half-a-crown, and was rigid and undilatable; it lay very high up, the placenta occupying its whole circumference; there were no pains. In her exhausted state, turning seemed contra-indicated, for she would not have borne the shock; and again, the os was undilatable, but this last state might have been remedied by plugging the vagina, and waiting; in all cases of plugging, however, some blood must necessarily be lost before the plug acts, and in her case the loss of a few ounces more would certainly have placed her in a very precarious state. I, therefore, introduced two fingers into the uterus, and carefully separated the placenta throughout its whole extent, leaving the membranes unruptured. The centre of the placenta did not correspond to the centre of the os,—the head presented. Two scruples of ergot of rye infused in hot brandy and water were next given, and after waiting a quarter of an hour for the action of the drug, I, with some difficulty, managed with the point of a lead pencil to perforate the membranes just beyond the anterior margin of the placenta, making only a small opening, so that the escape of the liquor amnii might be gradual, and the disturbance of the balance of circulation avoided. The ergot soon after acted, and the uterus contracting, slowly expelled the liquor amnii, and firmly embraced the child.

The ergot did not give rise to any distinct pains, but produced a state of tonic contraction. Some hot milk, in which two eggs had been beaten up, and mixed with brandy, was then given. Mr. Lakin shortly after arrived; she had by this time slightly rallied; her pulse was small, frequent, and intermitting; her extremities still cold; her breathing easier.

We now determined to give her another dose of ergot; this time its action failed altogether, it produced neither pains nor contractions; indeed I think it rather prostrated the system more, for shortly afterwards she fell into a state similar to that in which I first saw her, in which the collapse seemed even to threaten death. At times she was so much exhausted that I thought, in spite of all my caution, some portion of the placenta must still remain attached, and that internal hemorrhage was going on.

The os was now more dilatable and dilated, and I endeavoured to pass my hand into the uterus and remove the placenta, but there was considerable tonicity of the uterus, and the head of the child was firmly pressing against the placenta, so that it could not be removed without the employment of considerable force. A portion of the anterior margin, however, was brought down into the vagina,—it was very friable.

On consultation we determined not to remove the placenta, for it was doubtful whether she could even bear the force we must necessarily use, now that the liquor amnii had escaped, and the uterus had contracted. We, therefore, resolved to wait for the pains.

She began soon afterwards to wander in her mind, and became

very restless, throwing her arms about, and sighing, and whenever we spoke to her or touched her, she begged us to leave her alone and let her die quietly. She continued in this state until five o'clock, when Mr. Lakin, having been obliged to return home, on his way back met Dr. Heslop, and mentioned the case to him, speaking of the exhausted state of the woman. Dr. Heslop recommended galvanism. I must confess I was at first somewhat sceptical as to its influence, for I thought that Dr. Simpson in his six cases had fully proved the inefficacy of this agent. I went home, nevertheless, for the apparatus:—that which we use at the dispensary is one of Gore's large electro-galvanic machines, containing twelve cells. While we were preparing the apparatus the patient vomited several times; we only used six of the cells; one of the conductors was placed up the vagina in contact with the anterior margin of the womb, the point of the other externally over the fundus. Now that the galvanic circle was complete, she complained that we were cutting her, and running things into her. After we had applied it for ten minutes it was extraordinary to see how her system rallied, her face lost its corpse-like aspect, her eyes brightened, her mind no longer wandered, her pulse was plainly perceptible at the wrist; but its effect upon the uterus was still more remarkable; the hand placed on the fundus felt the womb rise and contract until it became hard as a board; and when the galvanic circle was broken by removing the conductor from the fundus the uterus was left firmly contracted.

After continuing the galvanism for half an hour her nervous energy was so much rallied that we thought the ergot might now be serviceable; we, therefore, administered some mixed with a little brandy, but it did not remain long on her stomach, for in less than ten minutes she vomited it up. We continued the galvanism for two hours, when the pains came on spontaneously; by this time the uterus had descended much lower, more of the placenta passed into the vagina; one piece, the size of a walnut, was broken off by the pains and came away. The head of the child was felt endeavouring to ride over the anterior margin of the placenta, and the uterus was dilated to the size of the bottom of a wine glass.

We left her now, directing that we should be sent for when the pains became more urgent, or should the flooding recommence.

In an hour and a half we were sent for,—we found the child's head in the hollow of the sacrum, beginning to press against the perineum; the pains were strong, and in a quarter of an hour she was delivered. The child had a strong corpse-like odour, which leads me to conclude that it had been dead previously to the separation of the placenta. Its face, lips, and surface generally, were blanched and colourless; the placenta immediately followed the expulsion of the child,—it had been pressed into the hollow of the sacrum, and ridden over by the head during the passage of the child. No clots followed, proving that there had been no internal hemorrhage, as I at one time feared. The uterus was felt in the abdomen firmly contracted. She was bandaged up tightly, and a dry doubled

sheet was placed underneath her. In a fortnight afterwards she was still in a very anemic state, but was gradually improving.

This case proves,—first, that, contrary to the usually received dogma, rigidity of the os uteri is compatible with extreme exhaustion of the patient.

Secondly, that the placenta can be completely separated from the parietes of the uterus by means of the finger when the os is undilatable and rigid. The proofs that the placenta was actually detached are three: 1st. The fact that the considerable oozing going on previously ceased immediately upon the separation of the placenta; 2nd. If the placenta had not been completely detached, internal hemorrhage must have occurred after the rupture of the membranes, for we can hardly imagine that at the eighth month of pregnancy a child's head could be so large as perfectly to compress a placenta seven or eight inches long, and that placenta separated to a very great extent. That there was no internal hemorrhage is proved by the fact of no clot escaping upon the removal of the placenta, or the birth of the child. The third proof is, that after separating, I carefully felt the margin of the placenta all round, so that not the smallest part could be attached.

Thirdly, that galvanism is an ecbolic agent, and also a stimulant to the nervous system generally. That it is an ecbolic agent is shown fairly by the manner in which it stimulated the womb to contraction, and eventually brought on spontaneous pains. It had a decided influence, for each time the galvanic circle was complete the uterus contracted until it became hard as a board, and when the circle was broken the womb subsided into a state of firm contraction, the active and intense state of contractibility being again brought on by the re-application of the galvanic current.

Fourthly, this case proves also the correctness of the statement of Dr. Radford, when he declares "that galvanism not only originates the temporary contractions of the uterus, but also produces such a lasting impression on the organ that pains continue to occur until the labour is terminated." That it is a stimulant to the nervous and arterial systems is shown by the brightening of the eye, the delirium of exhaustion ceasing, and the radial pulse becoming perceptible. Hence I think we may infer that galvanism is an important agent in all cases in which powerful contractions of the uterus are required, and that it is useful in hemorrhage both before and after labour, especially when combined with a funis presentation, it succeeds when the ergot fails, and when the uterus refuses to respond to the rupture of the membranes, friction of the abdomen, and the irritation of the vagina and cervix with the finger. I think also with Mr. Houghton[a], that it will in many cases obviate the necessity of applying the forceps.

Fifthly, it may be remarked, as regards the apparent inactivity of the treatment, that as my patient was so much exhausted, I ought

[a] Dublin Quarterly Journal of Medical Science, vol. xii. p. 27.

cautiously and carefully to have dilated the os uteri, and have performed the operation of version. But here, two circumstances forbad that plan of treatment, either of which taken separately is important, but when they occur together, show that the do-nothing plan I adopted was in this case judicious. The first circumstance is the rigidity and undilatability of the os. Now, we know, that in placenta prævia the cervix uteri plays the part of the fundus, and its vessels become enormously increased in size. Supposing that I had forcibly dilated the part, and turned and brought down the feet of the child, is it not probable that the irregular parts of the fœtus, the knees, nates, &c., must have lacerated and contused a part, unprepared and undilatable? It is true that for a time the limb or body of the child may serve as a plug and restrain hemorrhage, but this does not hold good after the birth of the child, when the hemorrhage may and perhaps would have occurred,—and if so, in the exhausted state of my patient, it must necessarily have proved fatal to her. In the second case of placenta prævia I ever attended, I turned and delivered before the os was, as I now consider, sufficiently dilated. In half an hour afterwards I was sent for; blood was flowing profusely, although the womb felt firm and contracted in the abdomen. I had some difficulty in restraining the hemorrhage, and thought my patient would have died. In another case the patient was attacked three or four days after with irritative fever, if not actually phlebitis, produced, I think, by the contusion of the os. Dr. Lee, in his twenty-third case of placenta prævia, says: "The effect produced by the hemorrhage was so great that it was evident death would soon take place if the delivery were not speedily completed, and the state of the orifice was such, that it was certain the hand could not be passed but with the greatest difficulty. I passed the right hand into the vagina, and insinuated my fingers between the uterus and placenta at the back part, and reached the membranes. But the rigidity of the orifice was so great, that, though I employed great force for a considerable time, I could not succeed in getting the hand into the uterus. Dr. Merriman, who was with me, recommended rupturing the membranes, and I was proceeding to do so with the fingers, when I felt one of the feet of the child, which I grasped and brought down into the vagina, enveloped in the membranes, which gave way. Nearly half an hour elapsed before the version could be completed, and when it was effected, the neck of the uterus grasped the neck of the child so firmly that I experienced the greatest difficulty in extracting the head, and not till I had made pressure for some time with the finger, and dilated the orifice of the uterus. A great discharge of blood instantly followed, the placenta was removed, and every means employed to stop the hemorrhage, but the breathing became hurried, the extremities cold, and she died in less than an hour after delivery." Reverting to my own case, the second circumstance was the extreme exhaustion of the woman. To turn when the patient is in a state of extreme exhaustion is now, I believe, generally deemed inadmissible. Dr.

Murphy in his Lectures says: "In a case of extreme exhaustion do not attempt to turn the child; rather separate the placenta, and leave the child undisturbed until some decided re-action takes place;" and in another place:—"If you were at once to turn the child and deliver, the fate of the patient would be sealed." Giffard, Smellie, and the late Dr. Rigby, relate four cases in which women, when extremely prostrated, have died from the shock of turning.

Case of Complete Amaurosis following Retinitis, successfully treated with Strychnia. By Daniel Griffin, M.D., M.R.I.A., Licentiate of the King and Queen's College of Physicians in Ireland, and Physician to the County of Limerick Infirmary, &c.

John O'Donnell, a labourer, aged 62, was received into the county of Limerick Infirmary on the 11th of November, 1852, perfectly blind, but otherwise in good health. He could hardly perceive the strongest light. He said he was but five weeks ill. The complaint began with pain over the brows and in the top of the head, attended with vertigo, so severe as nearly to render him incapable of walking. He had neither been bled nor leeched, and had taken scarcely any medicine; indeed, very little seemed to have been done for him except blistering the occiput and vertex about a fortnight after the first accession of the attack: and to this he attributed his blindness, as his sight had, he says, remained unimpaired up to that time. The iris is sluggish in its movements, but unchanged in colour, and shows no depositions on its surface; the pupils of both eyes are perfectly black, and moderately dilated; there is a zone of red vessels round the cornea, extending a considerable distance from its edge, and the conjunctiva is slightly injected throughout; he stands with that staring, vacant look which betokens the absence of all perception of external objects; there is considerable vertigo still, but the pain is abated.

Eight leeches were applied to each temple. He was ordered blue pill, hydrargyrum cum cretâ, nitre, and Dover's powder, in moderate doses, three times a day. On November the 15th, four days after his admission, the leeches were repeated as before, and he was directed to persevere in the use of the powders, which, on the 29th had produced so little effect that they were ordered to be taken at shorter intervals.

December 1st. There is scarcely any appearance of mercurialization, and the only change observable in the eyes is the removal of the increased vascularity and their return, in this respect, to a healthy aspect: there is not, however, the least sign of returning vision, even hardly so much as the perception of light. As I rather distrusted his statement regarding the length of time he was ill—many persons of his class seeking admission to the infirmary merely for the sake of temporary support—moreover, as I suspected, from the severity of the pain and vertigo, that the affection was associated with organic disease of the brain, I was very much in despair as to

his chances, and was about to dismiss him as incurable. On my visit next day, however, he told me he thought there was some slight amendment: I, therefore, directed him to remain, and ordered the following pills, one to be taken every night:—Strychnia, one grain; extract of gentian, six grains; to be divided into twelve pills: the powders to be omitted. December 9th. A decided and considerable improvement; the pills to be continued. 13th. Rather stationary since last report; to take a pill night and morning. 27th. The improvement goes on rapidly. He can see all objects around him with considerable distinctness, and walks much more steadily. January 13th, 1853. Very much improved. 26th. The right eye is perfectly restored, and the left nearly so. He says he can read his prayer-book quite as well as he ever did. Dismissed.

I observed during the progress of this case that the retina recovered its functions, not by a gradual amendment extending over its whole surface, but in parts and patches separately, almost as if these parts had no physiological connexion. It was singular to observe the odd attitudes he threw himself into as the improvement went on, to find out those parts of the membrane with which he could see when an object was placed before him, such as the hand or the finger. In all cases which have their origin in an inflammatory affection, it would seem to be of great importance to remove all traces of inflammatory action, as well as to pay extreme attention to the general health, before the use of strychnia is commenced.

This remedy has long had a high repute in the treatment of amaurosis, yet M. Riberi says, in the cases which he has hitherto administered it he has derived little or no benefit therefrom. He suspects, however, that in some of these he has not persevered long enough; and remarks, that the successful cases hitherto on record seem to indicate its use in incomplete rather than in complete amaurosis. I believe he always used the endermic method; and, from some published cases of his, he seems to depend more on nux vomica than on strychnia. It is singular to observe what a small amount of this drug is sufficient for success in some instances. The whole quantity which produced a complete restoration to sight in the case of O'Donnell was somewhat short of eight grains, and this spread over a space of about eight weeks, making about one grain per week.

On an Alvine Concretion, consisting of Cholesterine. By William D. Moore, A.B., M.B.

While occupied with the translation of the abstract of Dr. Alber's paper on Concretions in the Cæcum, given in the present Number of this Journal, it occurred to me to take the opportunity of placing on record a short note of a calculus which I examined with Dr. Hill in the month of August, 1850, and which we considered to have formed, if not altogether, at least in greater part, in the intestinal tube. The concretion in question was passed by a young lady, about whom Sir Henry Marsh had been consulted, and who had for

some time suffered from obstinate constipation and colicky pains, and had at last, with great pain and straining, voided it *per anum.* She had never suffered from jaundice, pain, or other symptoms, whereby the passage of a gall-stone could be inferred. The calculus in size and shape resembled a pullet's egg; it weighed 210 grains, but was specifically lighter than water, as was proved by its floating when placed in a vessel of that fluid. Its outer surface was tubercular, and exactly resembled that of a mulberry urinary calculus. Some shining scales were visible externally, and also throughout the mass when cut. On the application of heat it first fused, and then burned with a bright flame. It dissolved completely in boiling alcohol, and on cooling separated from its solution, as was seen under the microscope, in broad tabular crystals of cholesterine, which, with a small admixture of fæcal matter, composed the bulk of the concretion.

Many writers have supposed that because calculi found in the intestines, or voided *per anum*, have been proved to consist chiefly of cholesterine, they must necessarily have formed in the gall-bladder[a], and from that have passed either through the ducts, or by ulceration, into the intestine; and, in support of this view, it has been argued that, where the parts are neither inflamed, nor in a state of spasm, "the ductus choledochus may be considered to be in a passive state, admitting of an easy and gradual extension of its fibres, so as at length to allow of the free egress of the stone." It has also, indeed, been clearly proved by the example of a case in which a biliary calculus, in passing to the bowel, about a fortnight before being voided *per anum*, induced jaundice, yet gave no pain; that "the progress of gall-stones (even when inordinate in their dimension), through the ducts, is not disproved by the absence of pain from the epigastrium"[b].

However admissible the foregoing arguments may be, and conclusive as the case detailed by Dr. Wilson is in establishing the proposition he advances, a little consideration will, I think, show, that the fact of a calculus consisting in whole or part of cholesterine, is not sufficient to prove it to be of biliary origin. For cholesterine is, according to Berzelius, "universally diffused through all parts of the body, and dissolved in its fluids"[c]. Simon states that it is a normal constituent of the bile, of the brain, and of the spinal cord[d]. "It has been found," he adds, "in the blood; in the vernix caseosa; in the fluid of hydrocele; in an encysted tumour in the abdomen of a woman; in the ovary and testicle in a diseased state; in an abscess of the tooth; in a scirrhous structure in the mesocolon;

[a] See, for example, Mr. Thomas' observations in the Medico-Chirurgical Transactions, vol. vi. pp. 104, *et seq.*

[b] An Account of an unusually large Biliary Calculus, voided from the Rectum. By James Arthur Wilson, M. D., Physician to St. George's Hospital. Medico-Chirurgical Transactions, vol. xxvi. p. 80.

[c] Thierchemie, p. 173.

[d] Animal Chemistry, Sydenham Society's Translation, vol. i. p. 82.

in fungus medullaris; in medullary sarcoma; and in a vesical calculus extracted from a dog." Such being true, it is of course easily conceivable that a concretion composed of cholesterine might form, under predisposing circumstances, in some portion of the intestinal tube.

Dr. Douglas Maclagan was aware of the fallacy of inferring the origin of such calculi from their composition, for in his excellent paper on the Constitution of Intestinal Concretions, published in the London and Edinburgh Monthly Journal of Medical Science for September, 1841, he observes, after describing a case in which vast numbers of small concretions had been passed, in reference to the question, as to whether these were a variety of gall-stone, that "the presence of cholesterine is no criterion. This substance is not only," he observes, "contained in the bile, and is thus poured into the intestinal canal, where it may easily be deposited; but it is frequently found in situations totally unconnected with the biliary organs." This statement is so very explicit, that I should not have thought it necessary here to enter upon the question, did I not find that many are still of the opinion that concretions of cholesterine must necessarily be derived from the hepatic system.

In conclusion, with respect to the patient, in reference to whose symptoms Sir Henry Marsh was consulted, it is clearly possible that the concretion voided by her may have been, not of hepatic, but of intestinal origin; and it appears to me that, if this be admitted, it will also be allowed to be more probable that a large calculus, such as I have described, should have formed in the intestine, than have passed in a young subject from the hepatic system to the bowel, either through the ducts, or by ulceration, without giving rise to pain or jaundice.

On Typhlolithiasis and Typhlostenosis, by Dr. Albers.—The author's object in his paper, which appeared in the *Archiv für Physische Heilkunde*, is to throw some light on these two affections, the formations of concretions in, and the constriction of, the cæcum. Although these forms of disease are rare, they are not less dangerous than perityphlitis, typplitis, and perforations of the appendix vermiformis. In a scientific point of view, therefore, it would follow, that these diseases, however much the constitutional disturbances to which they give rise may differ, are nearly similar in their terminations; in like manner ossification everywhere depends on the same proximate conditions; and osteosis of the cæcum further shows, that the cicatrix of a healed lesion may still be capable of producing death. (The latter fact has long since been established in less rare forms of disease.)

I. Of intestinal concretions, those occurring in the cæcum demand our chief attention, on account of the severe sufferings produced by them. The attending symptoms are those of an inflammatory ileus,

the result is most generally fatal. As to situation, they occur either, (1) though most rarely, in the depression on the surface of the ilio-cæcal valve, looking towards the small intestine; or, (2) in the vermiform process; or, (3) on the broad surface of the cæcum, where they are generally retained by a projecting intestinal fold.

Even in the healthy state the ileo-cæcal valve is more strongly developed in its right half than in the left, and it there forms a depression similar to that of the semilunar valve of the aorta. This portion of the valve becomes still further developed in individuals who have repeatedly suffered from fæcal accumulations, or typhlitis stercoralis, and the above-mentioned depression then becomes a kind of pouch. In this lie concretions which probably have formed in the upper portions of the intestinal tube, and which, having passed down, are accidentally detained in it. Half of such a concretion which was sent to the author was as large as a walnut, and consisted of two distinct layers. The external, a light, friable, calcareous crust of some thickness; internally white, and enclosing a few portions of the rind of kernels of fruit: externally brown, and speckled here and there with white points. The nucleus was surrounded with a similar but much thinner layer, appearing like a leaf folded on itself, and gradually blending with the nucleus. Between the folds lay blackish grey-brown masses of hardened fæces. Microscopic examination disclosed in both layers a number of amorphous granules, of which the internal were more transparent than the external. In the centre of the nucleus were observed, with the aid of the microscope, the remains of a portion of cabbage leaf, and of muscular fibre, with crystals, including some of triple phosphate. From this, and the statement obtained of the post-mortem examination, it was inferred, that a nucleus of fæcal and calcareous matter had first formed, perhaps even in the higher portion of the small intestine, and that, during the retention of this nucleus in the pouch already described, a coating, consisting almost exclusively of calcareous granules, the result of a peculiar secretion of the mucous membrane, had been deposited on it. The condition of this thick coating, which was, moreover, quite uniform, proved the long detention of the concretion in the depression alluded to; the latter was, in this case, enlarged into the form of a sac, the mucous and muscular coats being atrophied in consequence of the pressure of the concretion, which was found immediately under the serous coat. The author illustrates this simultaneous obliteration of the intestine by the analogy of œsophageal diverticula. In addition, a congestive or inflammatory irritation appears sometimes to occur around the concretions, perhaps even causing the formation of organic blastemas, which envelop the concretions, and, where the latter are encysted, give the entire the appearance of a morbid growth. In proof of this the author quotes cases of the occurrence of such calculous formations in other parts of the intestinal tube, but especially in the colon and the small intestines.

The concretions which occur in the vermiform process are, ac-

cording to the observations which have hitherto been made, incrusted foreign bodies, or calculi properly derived from the mucous membrane.

The concretions found on the broad surface which the cavity of the cæcum presents internally have likewise been, in some instances, incrustations; in others, originally developed calculi. The author, in support of this, also quotes the observations of writers in reference both to man and the lower animals. These calculi have in general a roundish oval form, corresponding to the bulgings of the cæcum, and, like urinary calculi, present an uneven, mammilated surface, and frequently bear, as they do, impressions of the folds of mucous membrane. They consist of a light nucleus, on which the solid earthy layers have formed. In incrustations, too, the outer crust deposited around the foreign bodies is composed of layers, showing the interrupted manner in which the incrustation has taken place. Between these layers we find yellowish and gray deposits, as thin as paper, by means of which the several strata of deposit are, as it were, cemented together. In incrustations the nucleus is always a foreign body; in other concretions it is either a visible or invisible fæcal particle, or a pure calcareous mass. If the nucleus is soft, it may be assumed that it contains the residue of some article of food, such as crumbs of bread, or husks of oats or barley. Incrustations may contain the most dissimilar foreign substances, but a gall stone rarely forms the nucleus. The question whether all alvine calculi are not incrustations, and chiefly such as are found around gallstones, has been answered in the negative by the investigations and experience of the author and others, and it has been proved that concretions found in the cæcum are in general calculi purely derived from the mucous membrane, or incrustations, with commingled fæcal matter. The usual colour of these concretions in the human subject is brownish-yellow externally and in the nucleus, and white in the layers; in the horse they are ash-grey, both internally and externally; in serpents they are white; the bezoar of the mammalia is yellowish-white. Human concretions differ from those of the lower animals in the variety of their colouring, and their striking stratification. The best accounts given of the chemical nature of these formations are those by John, Davy, Thomson, and Wollaston. In no part of the intestine can the formation of concretions be regarded as the result of a purely chemical decomposition, the co-operation of a vital action is always requisite; a morbid secreting process, by which either the chemical elements are placed in a position, and receive a tendency, to combine, or an adhesive matter capable of uniting them, is prepared. This view is supported by the laminated constitution of the calculi and the simultaneous existence of several concretions. Most of them receive their foundation from the ingesta, and their further development is due to the aggregation of ingredients formed by abnormal secretion. The circumstances which determine these serial formations exhibit nothing essentially characteristic or different from those which attend other

affections of the cæcum. Besides, most of what the author says on the subject, and on the treatment, is borrowed from others. A case observed by him, in which the calculus was expelled by suppuration through a vicarious anus, gives, with Monro's corroborative experience, a hint to surgery.

II. *Calcareous deposits and formation of bone on the cæcum and in the surrounding parts.*—The former take place principally in the areolar tissue which attaches the cæcum and ileum to the abdominal parietes, close to the edge of the intestine, in the depression which the bowel forms posteriorly where it lies on the abdominal wall. They form concretions from the size of a pea to that of a hazelnut, which lie along the intestine in a series extending from an inch to an inch and a half in length. In the fresh state they are white, soft, and mortar-like; when dry, they are hard, as friable as chalk, or somewhat firmer; in the folds at the opening of the ileum into the cæcum round the junction of the latter with the colon, they penetrate from the sub-peritoneal areolar tissue into the wall of the intestine, injuring both its muscular coat and the intestinal canal. If they attain a more considerable size, they not only give rise to atrophy of the wall, but impede the peristaltic motion of the intestine. The fæces lie here, instead of being passed onwards, particularly when the earthy deposit, by its projection, diminishes the caliber of the canal, at the same time that by its size it interferes with the intestinal movements. Obstruction of the canal, impaction of the fæces and of the ileum, are the results. But a very calcareous mortary deposit seldom occurs in the cæcum without a similar deposit being at the same time found in the mesentery and in the lymphatic glands. Since the latter exhibit, in the chalky masses deposited in their interior, only the cicatrices of cured scrofulous affections, it is probable that the deposits around the cæcum owe their origin to the same disease, and that they are the remains of scrofulous formations which have previously taken place in the neighbourhood of this portion of the intestinal tract. The author, having attempted more fully to prove this position, proceeds to mention cases of illness caused by these chalky deposits. Since scrofula most generally leaves behind it only small morbid productions, from the size of a pin's head to that of a pea, which are subsequently found in the long fibrous areolar tissue surrounding the cæcum, and therefore appear in cicatrizing to have removed further from the intestine and to have withdrawn into the areolar tissue; and as they are even found in adults without having been attended with illness, they, as the remains of a disease which had existed, point to an interesting process of cure. On the contrary, those deposits which by their size prove injurious to the intestine, are so much more important for the physician, as they may even be the cause of death. A pain in the right iliac region, which is observed from time to time in scrofulous patients, is increased on pressure and thus exhibits its inflammatory nature; tension of the part usually occupied by concretions, and of the entire swollen abdomen; attacks

of diarrhœa with very mucous stools; nightly perspirations; paleness; fretfulness and variable appetite, lead to the suspicion of scrofulous depositions taking place in the neighbourhood of the cæcum. The occasional inflammatory irritation (pain) indicates what is going on in the cavity of the cæcum; when the inflammation extends to the mesentery, the seat of pain also becomes more extensive. If these symptoms, as they usually do, pass over disregarded, more considerable deposits of calcareous matter sometimes suddenly induce the most violent attacks of an inflammatory ileus. But even the less considerable depositions, which are not commonly brought under the notice of the physician, may excite an inflammation of the areolar tissue, a spurious peritonitis, which then in its turn may cause a perforation of the cæcum, as is observed in perityphlitis (rheumatica). Besides this deposition and calcification of the scrofulous matter in the areolar tissue, a calcification occurs in the glands which sometimes lie immediately on and about the cæcum. The intumescence of the mesenteric glands does not, generally speaking, always occur in the several cases of scrofulous disease in the same part of the mesentery. Their accumulation around the cæcum is rare, and then it is often found that they contain within them mortar-like, chalky masses, one of which forms the centre point of each independent gland. Convolutions of glands, as large as hens' eggs, often occur on the edge of the cæcum inclining to the great mesentery, while some of smaller size are found in the little mesentery of the vermiform process. The effects of such glandular masses, whether they contain calcareous deposits or not, on the portion of the intestine they adjoin, are the same as those of the above described deposits. They paralyze the intestine by their pressure, and cause torpor of the bowels and obstinate constipation. These glandular formations explain many of the symptoms which attend scrofula, and especially the constipation so frequent in combination with pain in the ilio-cæcal region. The cæcum being compressed and paralyzed by the enlarged mesenteric glands, is in such cases the proximate cause of the constipation. Ossification of the size of a pea, of a grape-stone, or of the shape of a little flat disk, occurs on the cæcum, especially on the arch of its free extremity. These are situated in the wall of the intestine, in the areolar tissue, or the muscular coat, and are consequently covered externally by its serous, and internally by its mucous, membrane. Dr. Albers' view is, that the subserous areolar tissue is the exclusive seat of such ossifications. Such superficial formations of bone appear to resemble those which occur in the form of flat disks under the pleura, on the arachnoid membrane of the brain, and on the peritoneum, and to be the result of a previous inflammation. The more frequent occurrence of such ossification on the cæcum than in the rest of the intestinal tract has been supposed to be owing to its situation being more favourable to such formation. This portion of the intestine is more liable than the rest to insidious inflammatory attacks; an inflammation of the cæcum may generally (?) be suspected whenever

the right iliac region is the seat of pain increased by pressure, and the other symptoms of the case indicate an affection of the digestive organs. If the inflammation run tolerably high, there will surely be a deposit of blastema in the intestinal walls, laying the foundation of osseous formation. In addition, it must be borne in mind, that scrofulous inflammations have their seat in this portion of the intestine, and in healing leave behind them chalky masses. Ossification of the appendix vermiformis, as well as the formation of chalky deposits on this part, is rare, although the deposition of scrofulous and tuberculous blastemas is frequent, particularly at its blind extremity under the peritoneum. Inflammation of the vermiform process seldom terminates in the manner above described, because the products of inflammation are almost entirely absorbed on the setting in of convalescence. It is supposed that this process possesses such a discutient power, in common with other canals invested with mucous membrane, in virtue of the abundant secretion of the latter being a means of relieving the disease and removing the morbid products; and the mucous (and fæcal) masses found in the appendix, show that its mucous membrane is capable of producing an abundant secretion. Dr. Albers, in conclusion, narrates two cases in which chalky deposits were found in the vermiform process. (We have reproduced this essay somewhat in detail, in order to place the reader in a position to judge how far the author has attained his object, as stated by him at the commencement, of throwing some light on lithiasis and osteosis of the cæcum.—Ed. V. f. d. p. H.)—*Vierteljahrschrift für die praktische Heilkunde*, 1853. 1 *Band. Analekten*, p. 46.

Case of Laryngeal Polypus. By Dr. G. Tourdes.

In but one of thirty-one cases of laryngeal polypi, recorded by M. Ehrmann[a], did recovery take place, and in it tracheotomy, performed in time, succeeded in saving the patient. Dr. Tourdes now adds to these melancholy statistics a fresh example of fatal termination. Perhaps, says he, the case I am about to detail may not be without some use as an additional argument in favour of an operation which too much want of success has thrown into discredit, but which is, nevertheless, valuable as an ultimate resource. Aloïse Saint-Julien, aged seven years, was admitted into the Orphan's Asylum at Strasburg, after the inundations of the month of September, 1852. He was a child of feeble constitution and of lymphatic temperament, affected with goitre, and presenting some of the features of cretinism. From information, which was not obtained until after his death, it appeared that he had been for some time subject to attacks of dyspnœa, which imperilled his life; and when his relatives

[a] Histoire des Polypes du Larynx, par M. Ehrmann, Professeur à la Faculté de Médecine de Strasbourg. Folio, avec planches. Strasbourg: 1850. [This important work is analyzed in our present Number. See page 117.—Ed.]

heard that he had ceased to exist, they expressed no surprise; they expected, they said, that he would die of suffocation. Soon after his arrival in the Asylum he took ill, being seized with very severe fits of coughing, attended with symptoms of impending asphyxia; on the 16th of November he was transferred to the Clinique for children's diseases, where I saw him for the first time. On entering the hospital the patient exhibited intense anxiety; at times asphyxia appeared to be imminent. During the attacks of dyspnœa the respiration was loud, sibilant, spasmodic, and accompanied by a hoarse cough; expiration seemed much more painful than inspiration. The paroxysm terminated without expectoration. During the interval between the attacks the dyspnœa invariably continued well marked; the voice was hoarse, altered, but never entirely lost; the cough was frequent, raucous, and sibilant, without expectoration. Auscultation showed a remarkable diminution of the respiratory murmur in both lungs, without any *rale*. Respiration was sibilant in the trachea and larynx. The throat and upper part of the pharynx showed no trace of false membrane; a little redness alone was visible. Pressure on the larynx externally gave no pain; no swelling could be discovered; the lymphatic glands of the neck were not enlarged. The skin was hot, and the circulation very much hurried. What was the cause of the impending asphyxia? The difficulty of diagnosis was increased by the absence of all information as to the boy's previous history. The first idea which occurred to me was that there might be a foreign body in the windpipe. On careful investigation, however, none was found; the patient's statements, too, were inconsistent with such an hypothesis. Was it a case of croup? The majority of the symptoms militated against this supposition. No trace of abscess was found in the larynx or its neighbourhood. There was no indication of œdema of the glottis. An acute idiopathic laryngitis might produce some of the symptoms, but could not explain all. By exclusion we arrived at the hypothesis of a laryngeal polypus, but the absence of all information as to the patient's antecedents removed one of the most valuable elements of diagnosis. In this uncertainty I took the opinion of my friend and colleague, M. Stoeber; he also thought that there was an obstacle to the passage of air in the larynx; that it was difficult to state its precise nature; but that tracheotomy was indicated as the most rational means of safety.

We referred the matter to our able operators, MM. Rigaud and Wieger. Deterred by the obscurity of the diagnosis, they hesitated, and, finally, expressed themselves against the operation. They reminded us that all the operations of tracheotomy, performed in the Strasburg hospital under analogous circumstances, had been followed by fatal results; we did not persevere in endeavouring to overcome their scruples: they were based on too serious motives, and we had not the elements of complete conviction to oppose them. The idea of tracheotomy having been abandoned, the indication now was to endeavour to destroy the obstacle which seemed to be placed

at the entrance to the larynx; two means were employed,—emetics in divided doses, and cauterization applied as directly and as deeply as possible. Tartar emetic was given at intervals; burnt alum was blown in; the back of the throat was touched with solution of sulphate of copper. Recourse was also had to mercurial frictions. All these measures were unavailing; the dyspnœa diminished for a few moments to re-appear with renewed intensity; the cough was constantly dry; the voice hoarse and sibilant, but not more changed than at the commencement. Intense fever soon set in; the patient experienced severe pains in the chest; the oppression became constant; the respiratory murmur was scarcely perceptible. A very acute double pleurisy was added to the original affection; the strength rapidly gave way, and on the 24th of November, eight days after his admission, the patient expired in an attack of dyspnœa, aggravated by the pulmonary complication, but evidently due, like the preceding attacks, to the lesion of the larynx.

The autopsy revealed the presence, under the glottis, of one of those vegetations which are known by the name of laryngeal polypus. A reddish, tolerably soft tumour, studded with protuberances, of the size and form of a flattened strawberry, occupied the left ventricle of the larynx, and extended over the arytenoid cartilages, to the right ventricle, which was intact. The posterior and left lateral portions of the glottis were closed by this polypus, which occupied about three-fourths of the opening. This tumour was attached to the larynx by a very wide base; with this exception, it had much resemblance to the vegetations represented in M. Ehrmann's Plates, No. I. Fig. 2, and No. II. Fig. 1. The thyroid glands were highly developed, and united in front of the trachea. A thick layer of false membranes, soft and albuminous, covered the two pleuræ; the pulmonary tissue was simply congested; the bronchi contained a great quantity of frothy mucus; the mucous membrane itself was healthy. This case is suggestive of several remarks. If the previous history of the patient had been known, the diagnosis would have been based, we may believe, on evidence sufficient to remove all opposition to the operation of tracheotomy. But, in the absence of all such information, the symptoms left the case doubtful. If we examine, in fact, the several cases of laryngeal polypi which have been published, we shall see that the course of the disease, and the gradual development of the symptoms, have furnished the signs which have determined the diagnosis. Authors do not describe any pathognomonic character; to the symptoms which indicate that the obstacle to the entrance of the air has its seat in the larynx, they add, as more direct proofs, the *bruit de soupape;* the fact of expiration being more difficult than inspiration; the expectoration of fragments of the polypus; the touch, too, if the foreign body has passed the epiglottis. But all these characters may be wanting, and most frequently it is the duration and the progress of the disease which remove uncertainty and confirm the diagnosis. In the present case this element of proof was altogether absent. The existence of the goitre might have ren-

dered tracheotomy difficult, but if performed in time the operation would, without doubt, have prolonged the patient's life. The double pleurisy, which accelerated his death, was but slowly developed. There was no organic contra-indication. The obstacle to respiration was situated in the larynx; the trachea having been opened, the air would have reached the lungs without impediment. The performance of the operation would have been, however, but the first part of the task; the second would have presented serious difficulties. To have effected a radical cure, it would have been necessary to destroy the polypus by cauterization, or to remove it by excision. In this, undoubtedly, we should have had the example of M. Ehrmann's successful case: having prevented asphyxia by opening the trachea, our learned colleague divided the larynx and cut away the polypus, interposing an interval of two days between the two operations. In my patient the tumour was attached to the larynx by a very broad base, which would have further increased the difficulty of cure. A feeling of repugnance naturally arises to the operation of tracheotomy; in croup especially this feeling is justified by the usual want of success, and by the results of post-mortem examinations, which most frequently show that the extension of the disease would have rendered operation useless. In Strasburg tracheotomy in croup has for many years invariably failed. However, in two instances in which these general considerations prevented the performance of the operation, I saw dissection prove that tracheotomy might have saved the patient. The first case was that of a child who sank under a purely laryngeal croup, without any affection of the trachea or bronchi. This unfortunate patient was brought to hospital some days after another child, who died of croup in spite of the operation. This failure offered little encouragement to renew the experiment; the operation was not performed, and yet it might have succeeded. The second case is that of laryngeal polypus just detailed. It is as an additional argument in favour of tracheotomy that I contribute this case to the sad statistics of laryngeal polypi. As before remarked, of thirty-one cases collected by M. Ehrmann in his memoir, thirty were fatal; doubtless this proportion might have been different if tracheotomy had been more frequently resorted to.—*Gazette Médicale de Strasbourg*, January 24, 1853, p. 9.